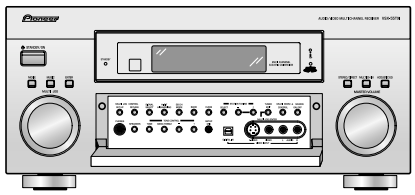
Pioneer *sound.vision.soul*

Service Manual



VSX-55TXi

ORDER NO.
RRV2788

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-55TXi
VSX-53TX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-55TXi	KUXJI/CA	AC120V	
VSX-53TX	KUXJI/CA	AC120V	

For details, refer to "Important symbols for good services".

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ⓒ**PIONEER CORPORATION 2003**

T-ZZK JUNE 2003 printed in Japan

SAFTY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

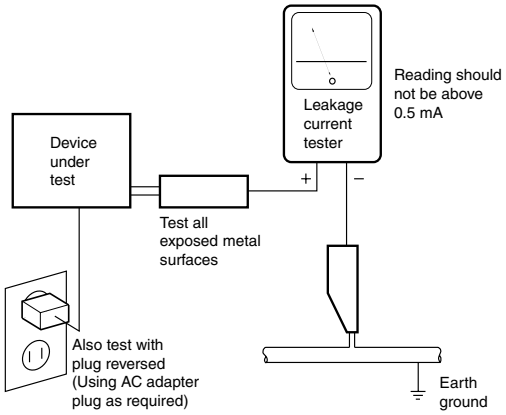
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Amplifier Section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion (front).**

Continuous Power Output
- Front.....100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
- Center.....100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
- Surround.....100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
- Surround Back .....100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)

Audio Section

Input (Sensitivity/Impedance)
- PHONO MM.....4.7 mV/47 kΩ
- LINE.....335 mV/47 kΩ

Frequency Response
- PHONO MM.....20 Hz to 20,000 Hz ± 0.3 dB
- LINE.....5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
- LINE.....335 mV/2.2 kΩ

Tone Control
- BASS.....± 6 dB (100 Hz)
- TREBLE.....± 6 dB (10 kHz)
- LOUDNESS.....+4/+2 dB (100Hz/10 kHz) (at volume position -40dB)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- LINE.....101 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
- LINE.....83 dB

* *Measured pursuant to the Federal Trade Commissionís Trade Regulation rule on Power Output Claims for Amplifiers.*

** *Measured by Audio Spectrum Analyzer.*

Video Section (S jack)

Input (Sensitivity/Impedance).....1 Vp-p/75 Ω
Output (Level/Impedance).....1 Vp-p/75 Ω
Frequency Response.....5 Hz to 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio.....65 dB

Component Video Section

Input (Sensitivity) .....1 Vp-p/75 Ω
Output (Level/Impedance).....1 Vp-p/75 Ω
Frequency Response.....5 Hz to 40 MHz $^{+0}_{-3}$dB
Signal-to-Noise Ratio.....65 dB

Video Section (Composite)

Input (Sensitivity/Impedance)
- LINE.....1 Vp-p/75 Ω

Output (Level/Impedance)
- LINE.....1 Vp-p/75 Ω

Frequency Response
- LINE.....5 Hz to 10 MHz $^{+0}_{-3}$ dB

Signal-to-Noise Ratio.....65 dB

FM Tuner Section

Frequency Range.....87.5 MHz to 108 MHz
Usable Sensitivity.....Mono: 13.2 dBf, IHF (1.3 µV/75 Ω)
50 dB Quieting Sensitivity.....Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio.....Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion.....Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity.....60 dB (400 kHz)
Stereo Separation.....40 dB (1 kHz)
Frequency Response.....30 Hz to 15 kHz (± 1) dB
Antenna Input.....75 Ω unbalanced

AM Tuner Section

Frequency Range.....530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna).....350 µV/m
Selectivity.....25 dB
Signal-to-Noise Ratio.....50 dB
Antenna.....Loop antenna

Miscellaneous

Power Requirements.....AC 120 V, 60 Hz
Power Consumption.....600 W
Power Consumption in Standby mode.....0.8 W
AC Outlet SWITCHED.....100 W (0.8 A) MAX
Dimensions.....420 (W) x 188 (H) x 464 (D) mm
(16-9/16 (W) x 7-7/16 (H) x 18-5/16 (D) in.)
Weight (without package).....19.0 kg (41.9 lbs)

Furnished Parts

FM wire Antenna.....1
AM loop Antenna.....1
"AA" IEC LR6 batteries.....4
Remote Control Unit.....1
Microphone for Auto Surround Sound Setup.....1
Microphone Stand for Auto Surround Sound Setup.....1
Operating Instructions.....1

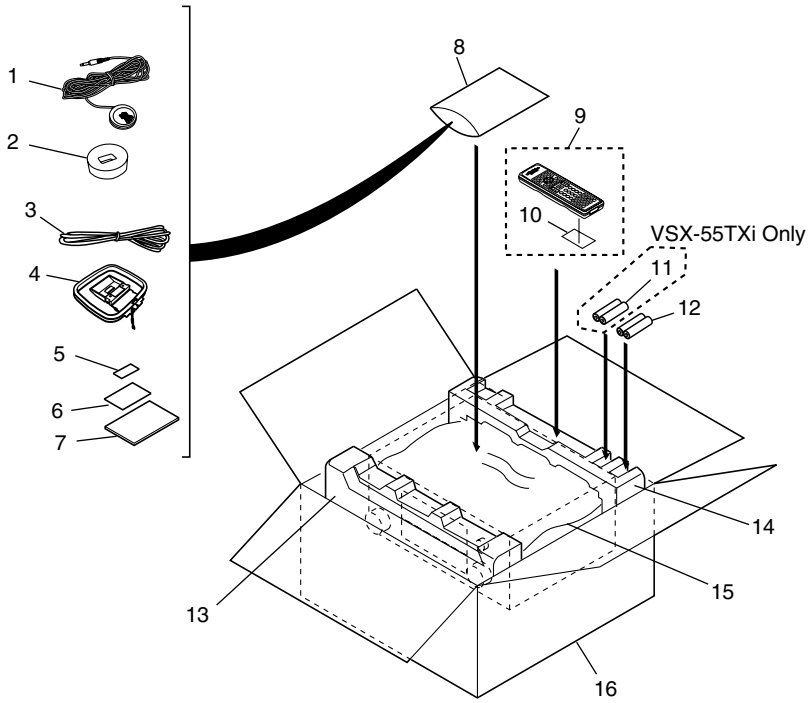
NOTE:
Specifications and the design are subject to possible modifications without notice, due to improvements.

- Lucasfilm and THX are trademarks or registered trademarks of Lucasfilm, Ltd. and TM. Surround EX is a jointly developed technology of THX and Dolby Laboratories, and is a trademark of Dolby Laboratories. All rights reserved. Used under authorization.
- Manufactured under license from Dolby Laboratories. “Dolby”, “Pro Logic”, “Surround EX” and double-D symbol are trademarks of Dolby Laboratories.
- "DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

2. EXPLODED VIEWS AND PARTS LIST

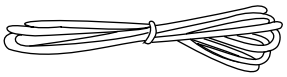
NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING

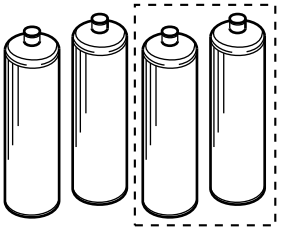


● Accessories

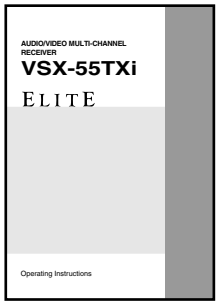
AM Loop Antenna
(ATB7009)



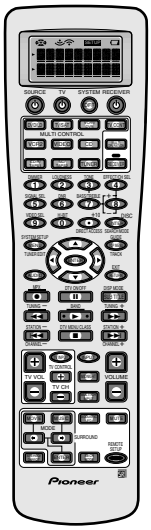
FM Wire Antenna
(ADH7004)



"AA" IEC LR6 batteries

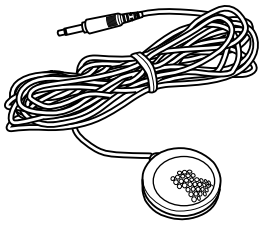


Operating Instructions
(VSX-55TXi : ARB7284)
(VSX-53TX : ARB7285)

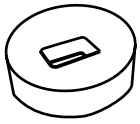


Remote Control Unit
(VSX-55TXi : AXD7325)

Remote Control Unit
(VSX-53TX : AXD7365)



Microphone for Auto
Surround Sound Setup
(APM7004)



Microphone Stand for Auto
Surround Sound Setup
(AEB7269)

(1) PACKING parts List

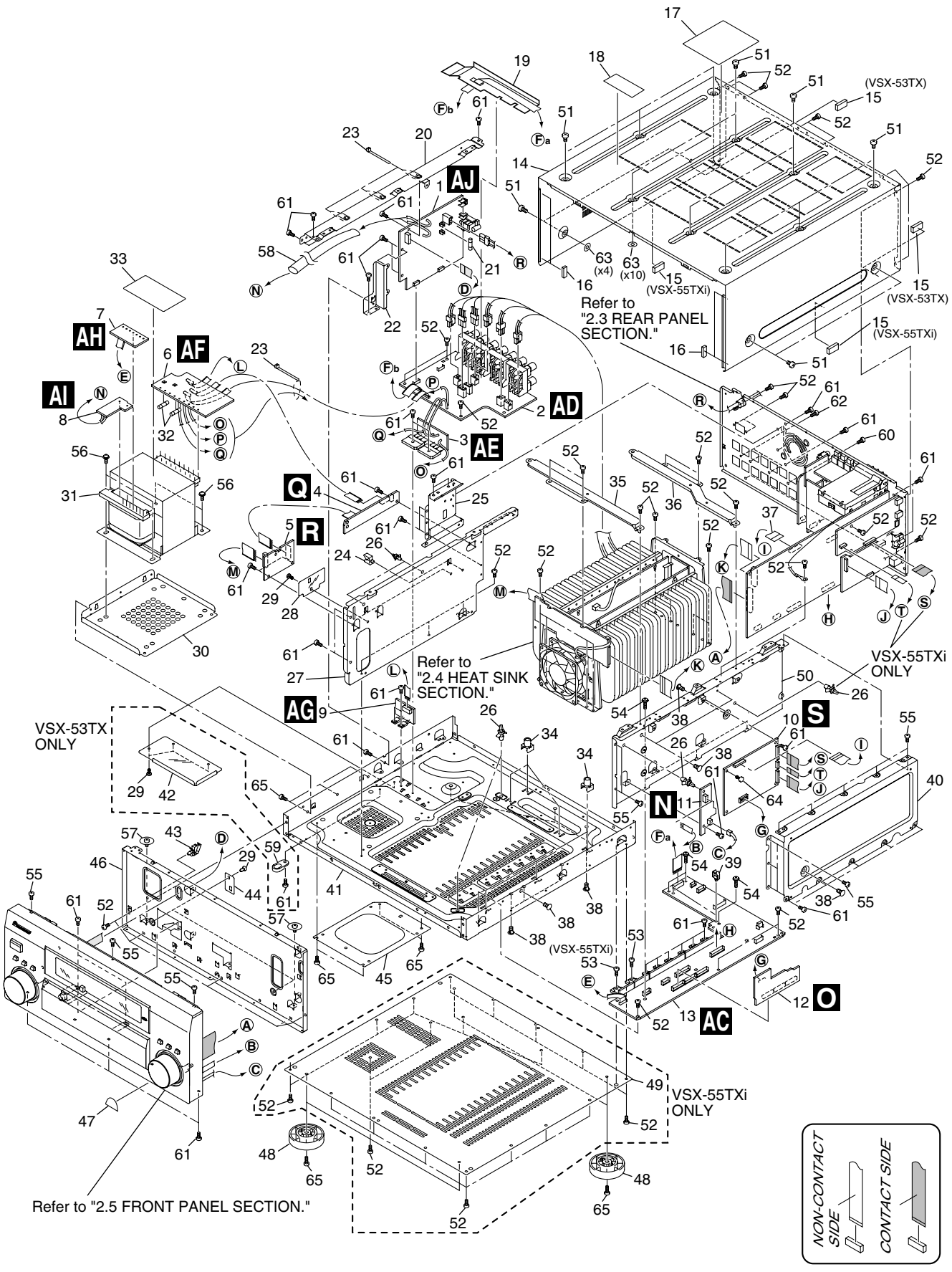
Mark	No.	Description	Part No.
	1	Microphone	APM7004
		for Auto Surround Sound Setup	
	2	Microphone Stand	AEB7269
		for Auto Surround Sound Setup	
	3	FM Wire Antenna	ADH7004
	4	AM Loop Antenna	ATB7009
	5	Caution Sheet SP,E	ARM7056
NSP	6	Warranty Card EL	ARY7007
	7	Operating Instructions (English)	See Contrast table (2)
NSP	8	Polyetylene Bag	Z21-038
		(0.03*230*340)	
	9	Remote Control Unit	See Contrast table (2)
	10	Battery Cover	See Contrast table (2)
NSP	11	"AA" IEC LR6 batteries	See Contrast table (2)
NSP	12	"AA" IEC LR6 batteries	VEM1023
	13	Front Pad 45	AHA7374
	14	Rear Pad 45	AHA7375
	15	Packing Sheet	RHC1023
	16	Packing Case	See Contrast table (2)

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	7	Operating Instructions (English)	ARB7284	ARB7285
	9	Remote Control Unit 45/KU	AXD7325	Not used
	9	Remote Control Unit 53/KU	Not used	AXD7365
	10	Battery Cover	AZN7896	AZA7424
NSP	11	"AA" IEC LR6 batteries	VEM1023	Not used
	16	Packing Case 55KU	AHD8199	Not used
	16	Packing Case 53KU	Not used	AHD8203

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION parts List

Mark	No.	Description	Part No.
	1	PRIMARY Assy	AWX7968
	2	SP/PS Assy	See Contrast table (2)
	3	DIODE Assy	AWX8017
	4	FAN CONNECTION Assy	AWX8005
	5	FAN DRIVE Assy	AWX7976
	6	TRANS 2-1 Assy	AWX8326
	7	TRANS 2-2 Assy	AWX7970
	8	TRANS 1 Assy	AWX7969
	9	VH TR Assy	AWX8018
	10	DSP ASSY	AWX8249
	11	MIC AMP Assy	AWX8004
	12	DSP CONNECTION Assy	See Contrast table (2)
	13	REGULATOR Assy	See Contrast table (2)
	14	Bonnet Case 45B	AZN7897
	15	Spacer 45A	AEB7263
	16	Spacer 45B	AEB7264
	17	Label (DD/DTS/THX)	ARW7177
	18	Label (FCC/DOC)	ARW7191
	19	Barrier 45	AEC7444
	20	Left Beam 45	ANG7401
⚠	21	FU1 Fuse (10A)	VEK1029
	22	Primary Angle 35	ANG7301
NSP	23	Binder	ZCA-BK1
NSP	24	Mini Clamp	VEC1597
	25	Fan Box 45	ANG7413
	26	Locking Card Spacer	PNW2917
	27	Trans Shield 45	ANG7400
	28	Styling Sheet B	AEC7437
	29	Push Rivet	AEC7370
	30	Trans Frame 45	ANG7399
⚠	31	T1 Power Transformer	ATS7328
⚠	32	FU4,FU5 Fuse (3.15A)	REK1114
NSP	33	Trans Label 45	AAX7957

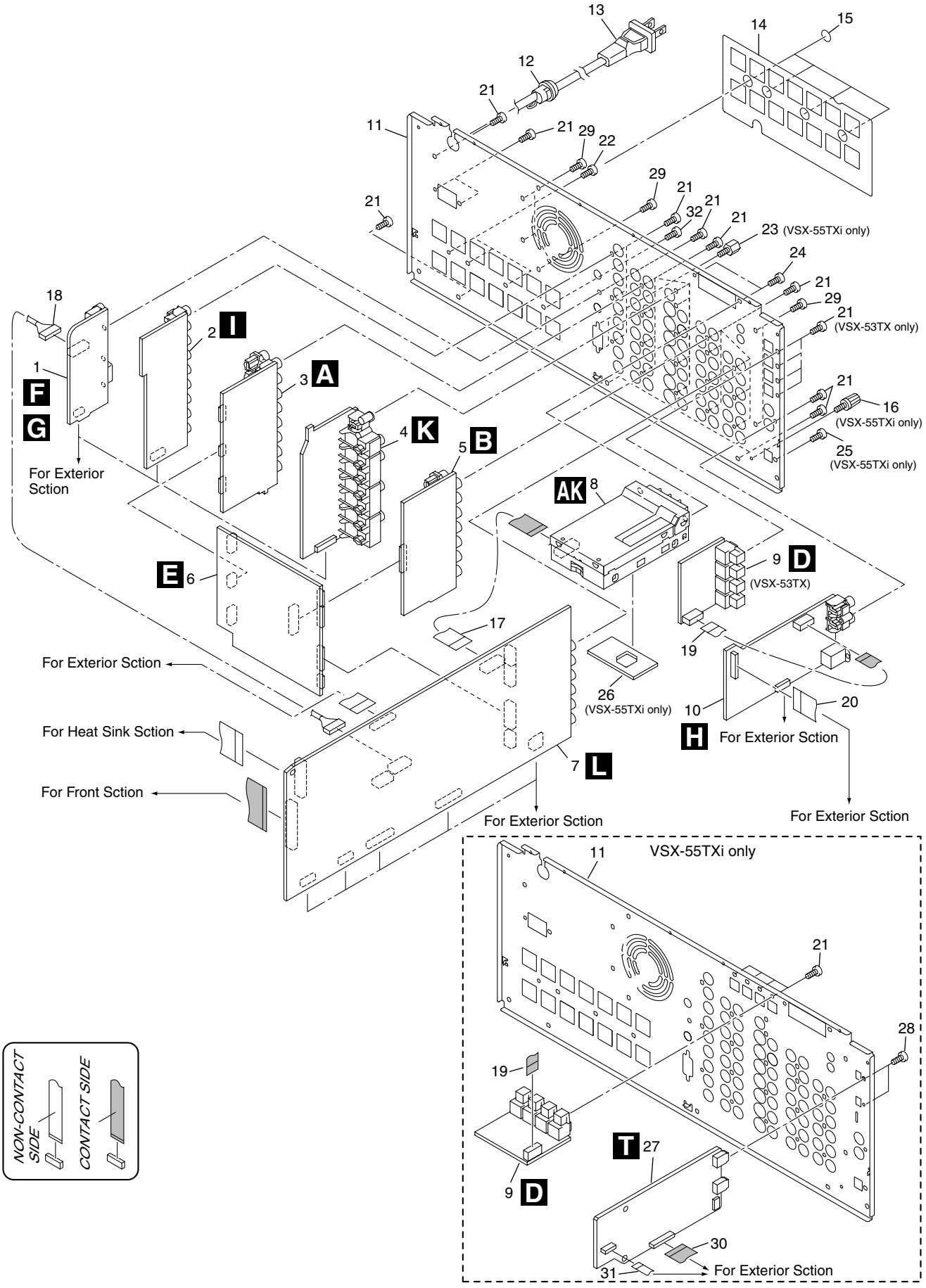
Mark	No.	Description	Part No.
	34	PCB Mold	AMR2534
	35	Bridge Frame 45F	ANG7409
	36	Bridge Frame 45R	ANG7410
	37	J7 21P FFC/60V	ADD7355
	38	Card Spacer	DNK2769
	39	Wire Clip (A)	VEC1355
	40	DSP Shield 45B	ANG7403
NSP	41	Under Base	See Contrast table (2)
	42	Screw Cover 45A	See Contrast table (2)
NSP	43	Wire Saddle	DEC1450
	44	Styling Sheet	AEC7413
	45	Stabilizer 45	ANG7408
NSP	46	Panel Stay 45	AND7047
NSP	47	Energy Star Label	AAX7876
	48	Insulator	PNW2766
	49	Bottom Plate 45	See Contrast table (2)
	50	DSP Shield 45A	See Contrast table (2)
	51	Screw	BBZ40P080FZK
	52	Screw	BBZ30P080FCC
	53	Screw	BBZ30P100FCC
	54	Screw	IBZ30P150FCC
	55	Screw	BBT30P080FCC
	56	Screw	ABA7066
	57	Screw	ABA7009
	58	UL Tube	ADN7007
	59	Screw Cover	
		See "2.5 FRONT PANEL SECTION" No. 19-3	
	60	Screw	ABA1208
	61	Screw	IBZ30P080FCC
	62	Screw	IBZ30P100FCC
	63	Spacer Circle	AEC7330
	64	Nylon Rivet	AEC7408
	65	Screw	See Contrast table (2)

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	2	SP/PS Assy	AWX8307	AWX7975
	12	DSP CONNECTION Assy	AWX8299	AWX8024
	13	REGULATOR Assy	AWX8303	AWX7967
NSP	41	Under Base 45	ANA7138	Not used
NSP	41	Under Base 53	Not used	ANA7158
	42	Screw Cover 45A	Not used	AEC7414
	49	Bottom Plate 45	ANF7031	Not used
	50	DSP Shield 1394 A	ANG7420	Not used
	50	DSP Shield 45 A	Not used	ANG7402
	65	Screw	BBZ30P080FCC	IBZ30P080FCC

2.3 REAR PANEL SECTION



(1) REAR PANEL SECTION parts List

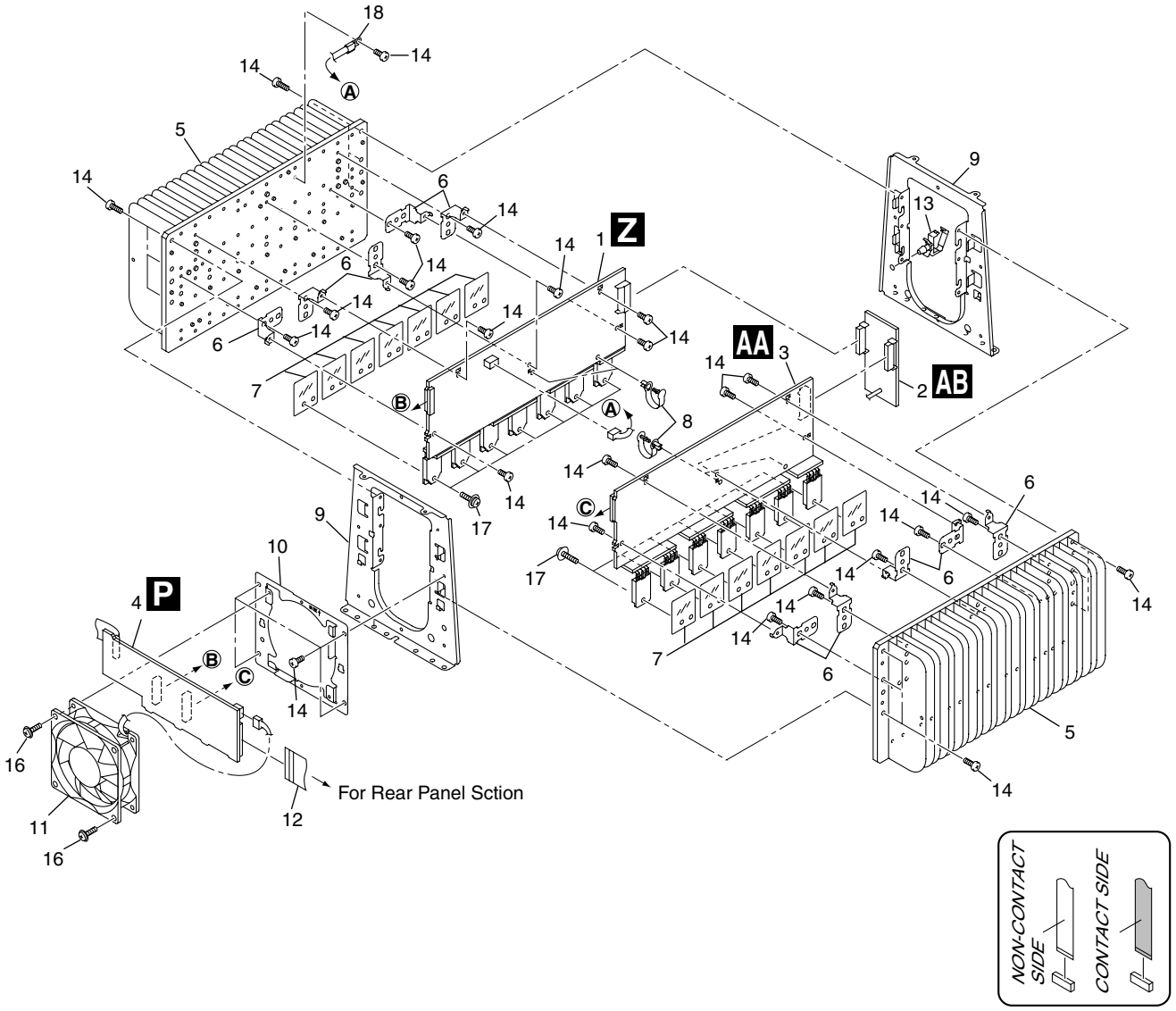
Mark	No.	Description	Part No.
	1	RS232C Assy	See Contrast table (2)
	2	COMPONENT Assy	See Contrast table (2)
	3	7.1CH I/O Assy	See Contrast table (2)
	4	VIDEO Assy	See Contrast table (2)
	5	V-AUDIO IN Assy	See Contrast table (2)
	6	INPUT CONNECT Assy	AWX7974
	7	MAIN CONTROL Assy	See Contrast table (2)
	8	FM/AM TUNER Module	AXQ7231
	9	OPTICAL IN Assy	AWX7978
	10	COAXIAL IN Assy	See Contrast table (2)
	11	Rear Panel	See Contrast table (2)
	12	Cord Stopper	CM-22C
⚠	13	AC Power Cord	VDG1075
	14	Speaker Sheet	AAK8016
	15	Cushion Circle 16B	AED7052
	16	Screw with Terminal	See Contrast table (2)
	17	J8 13P FFC/60V	ADD7356
	18	J1902 Connector Assy (8P)	ADE7085
	19	J5 9P FFC/60V	See Contrast table (2)
	20	J6 20P FFC/60V	ADD7354
	21	Screw	BBZ30P080FCC
	22	Screw	IBZ30P100FCC
	23	Screw	See Contrast table (2)
	24	Screw	VPZ30P100FZK
	25	Screw	See Contrast table (2)
	26	Tuner Spacer	See Contrast table (2)
	27	1394 Assy	See Contrast table (2)
	28	Screw	See Contrast table (2)
	29	Screw	IBZ30P080FCC
	30	J16 22P FFC/60V	See Contrast table (2)
	31	J17 10P FFC/60V	See Contrast table (2)
	32	Screw	ABA1208

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	1	RS232C Assy	AWX7966	Not used
	1	12V TRIGGER Assy	Not used	AWX8310
	2	COMPONENT Assy	AWX8293	AWX8295
	3	7.1CH I/O Assy	AWX8306	AWX7973
	4	VIDEO Assy	AWX8311	AWX7962
	5	V-AUDIO IN Assy	AWX8313	AWX7964
	7	MAIN CONTROL Assy	AWX8285	AWX8289
	10	COAXIAL IN Assy	AWX8300	AWX8323
	11	Rear Panel 55KU	ANC8192	Not used
	11	Rear Panel 53KU	Not used	ANC8196
	16	Screw with Terminal	AKE-031	Not used
	19	J5 9P FFC/60V	ADD7430	ADD7353
	23	Screw	ABA7078	Not used
	25	Screw	PMZ30P060FCC	Not used
	26	Tuner Spacer	AEC7314	Not used
	27	1394 Assy	AWK7768	Not used
	28	Screw	PCZ26P060FMC	Not used
	30	J16 22P FFC/60V	ADD7431	Not used
	31	J17 10P FFC/60V	ADD7432	Not used

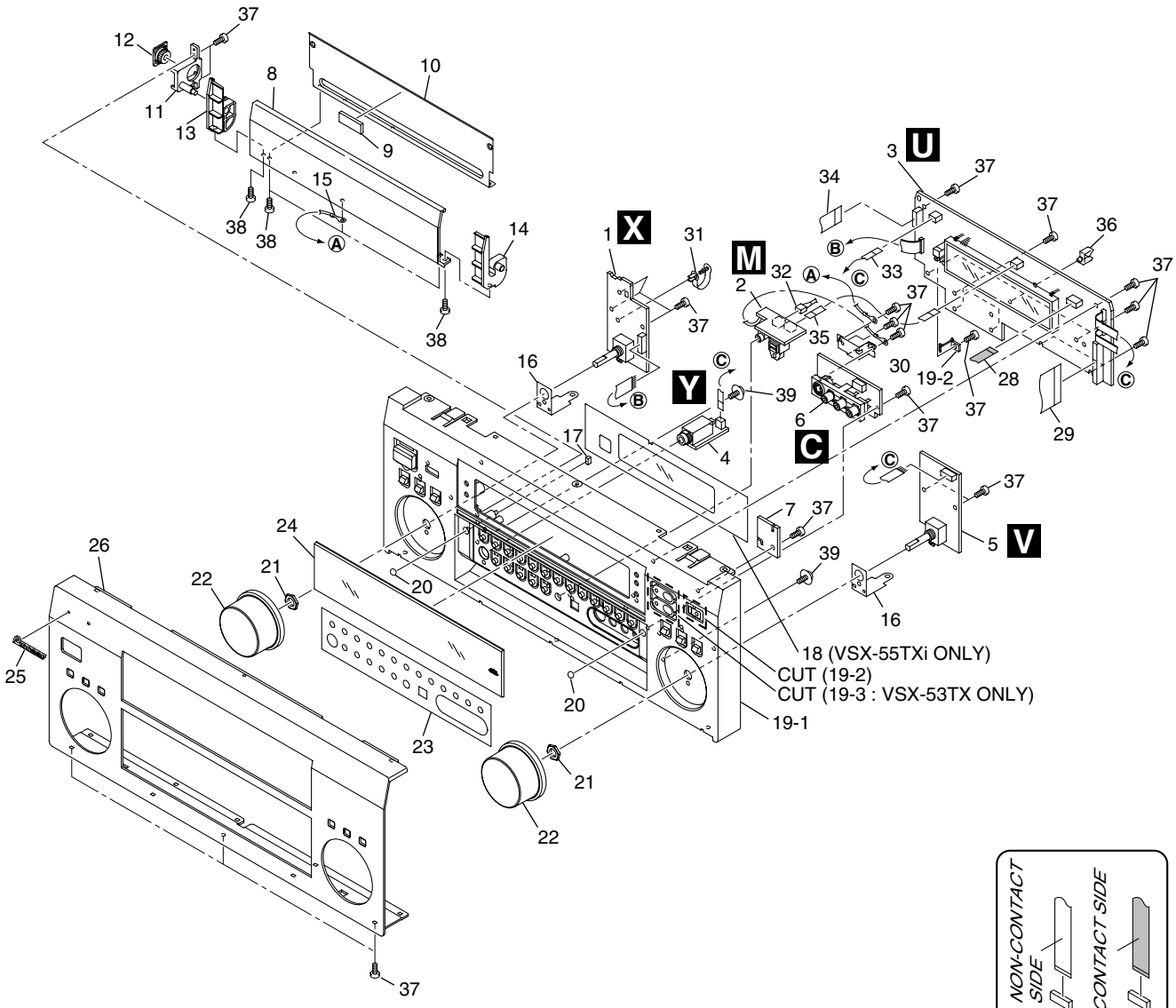
2.4 HEAT SINK SECTION



HEAT SINK SECTION parts List

Mark	No.	Description	Part No.
	1	POWER AMP-L Assy	AWX7984
	2	POWER AMP-C Assy	AWX7986
	3	POWER AMP-R Assy	AWX7985
	4	POWER AMP IN Assy	AWX7982
NSP	5	Heat Sink 45	ANH7152
	6	PCB Angle 45	ANG7406
	7	Mica Sheet 45	AEE7047
NSP	8	Speed Clamp	AEC7445
	9	H.S Angle 45	ANG7404
	10	Fan Holder 80	ANG7407
⚠	11	Fan Motor	AXM7023
	12	J14 24P FFC/60V	ADD7357
NSP	13	Wire Saddle	DEC1450
	14	Screw	BBZ30P100FCC
	15	••••••	
	16	Screw	BBZ30P300FMC
	17	Screw	ABA7085
⚠	18	TH1 Thermistor	AEX7004

2.5 FRONT PANEL SECTION



(1) FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	MULTI JOG Assy	AWX7972
	2	MIC & F.OPT IN Assy	AWX7981
	3	DISPLAY Assy	See Contrast table (2)
	4	HEADPHONE Assy	AWX7980
	5	VOLUME Assy	AWX7971
	6	FRONT IN Assy	AWX7977
	7	STYLING Assy	• • • • •
	8	Door 45	ANB7277
	9	Spacer 45A	AEB7263
	10	Door Stay 45B	AAH7089
	11	Door Shaft 35	AMR7295
	12	Damper Assy (200)	AXA7088
	13	Door Hinge L 45B	AMR7386
	14	Door Hinge R 45B	AMR7387
NSP	15	Earth Lead Wire	ADH7022
	16	Earth Plate B	ANG7412
	17	Magnet 35	AMF7007
	18	FL Sheet 45R	See Contrast table (2)
	19-1	Panel Base 45B	AMB7803
	19-2	Magnet Holder	
	19-3	Screw Cover	
	20	Cushion Circle 6B	AED7044
	21	Nut	NK90FUC
	22	Rotary Knob L BK	AAA7018
	23	D.Sheet	AAK7955
	24	Window	See Contrast table (2)
	25	Pioneer Badge B	PAN1376
	26	F.Panel	See Contrast table (2)
	27	• • • • •	
	28	J4 7P FFC/60V	ADD7352
	29	J1 32P FFC/60V	ADD7349
	30	Earth Plate A	ANG7411
NSP	31	Speed Clamp	AEC7445
	32	J1901 Connector Assy (3P)	ADE7084
	33	J15 3P FFC/60V	ADD7371
	34	J2 11P FFC/60V	ADD7350
	35	J3 4P FFC/60V	ADD7351
	36	Wire Clip (A)	VEC1355
	37	Screw	BPZ30P100FMC
	38	Screw	BBZ30P080FCC
	39	Screw	ABA7009

(2) CONTRAST TABLE

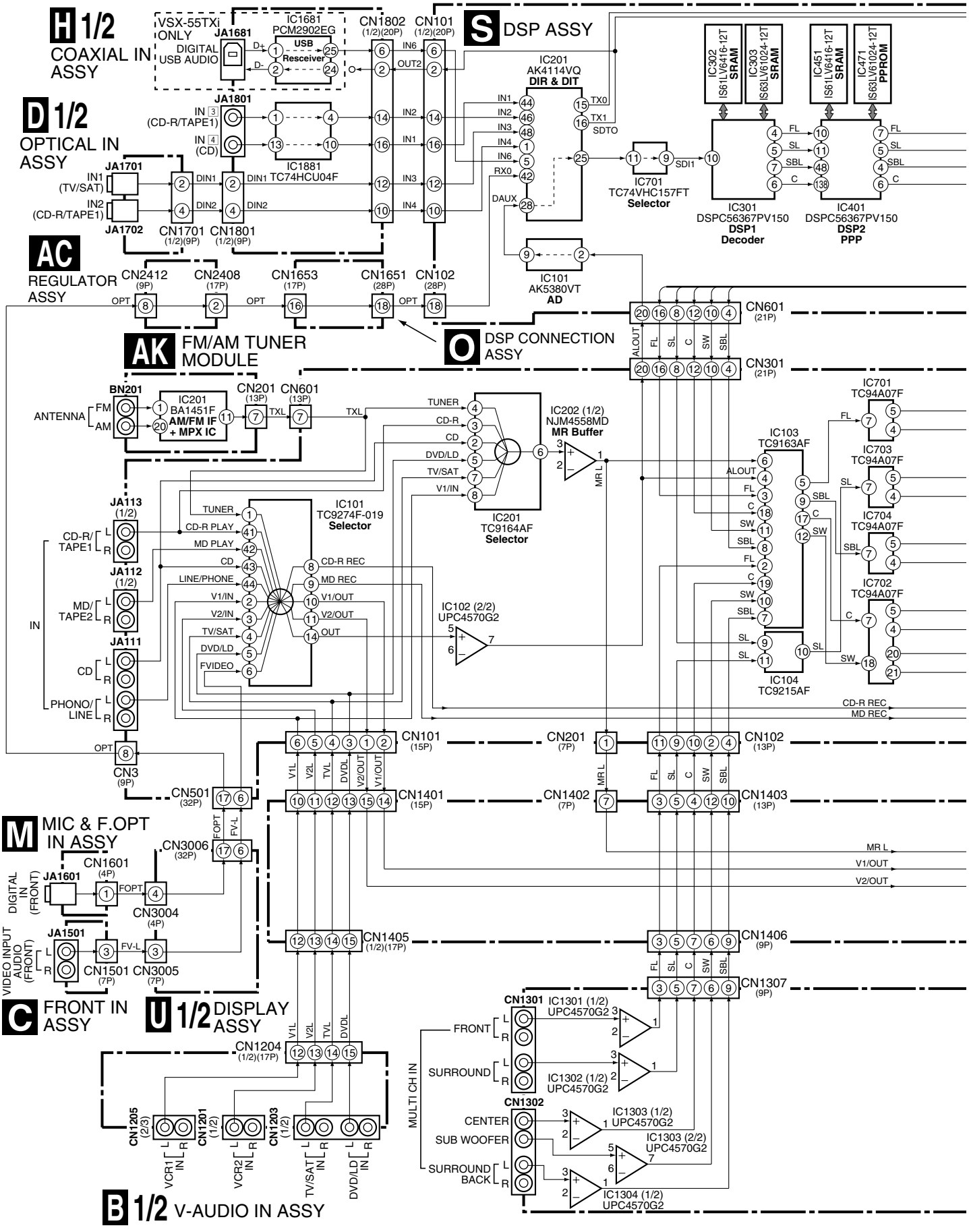
VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

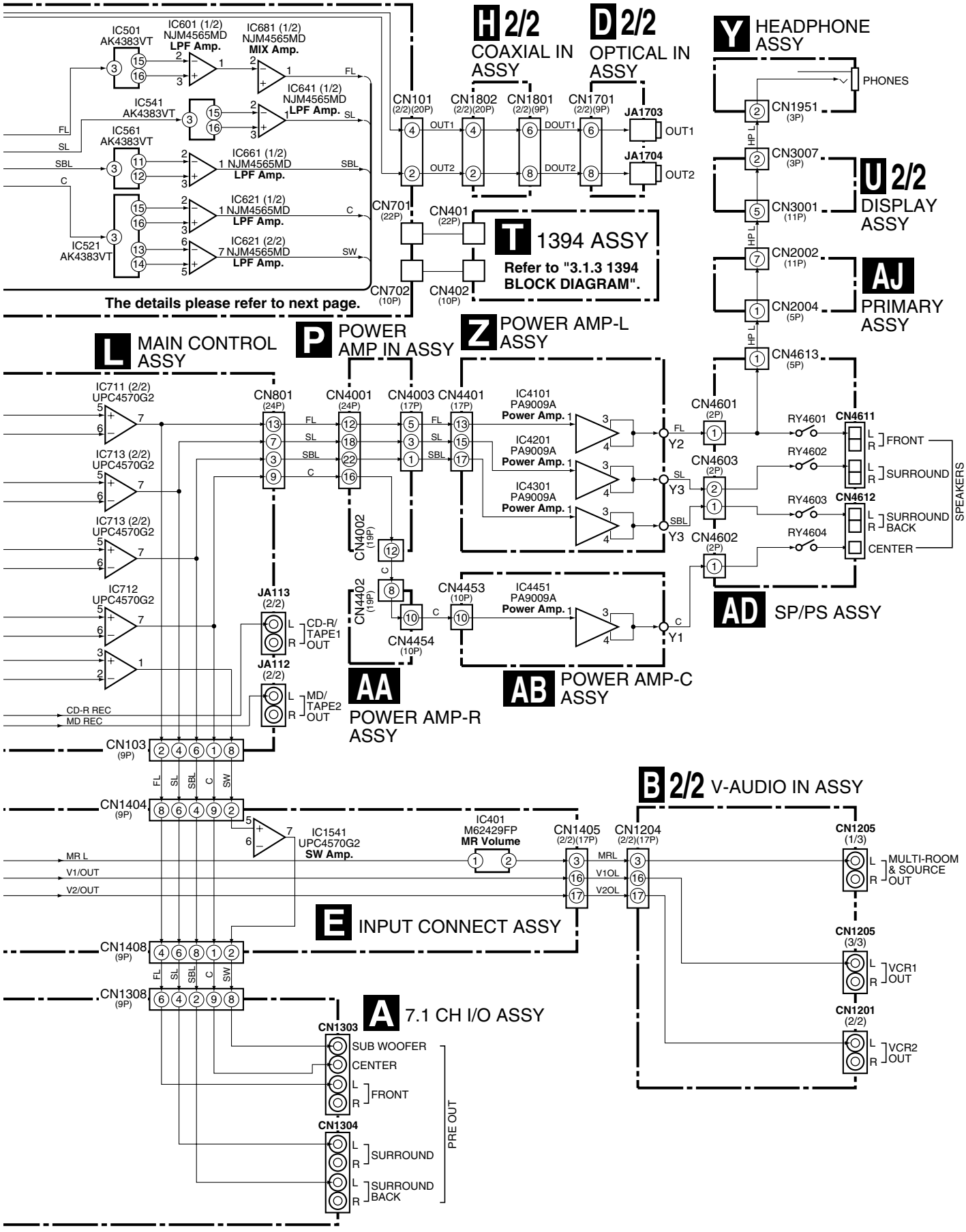
Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	3	DISPLAY Assy	AWX8315	AWX7983
	18	FL Sheet 45R	AAK7957	Not used
	24	Window 55	AAK8150	Not used
	24	Window 53R	Not used	AAK8155
	26	F.Panel 55BKU	ANB7312	Not used
	26	F.Panel 53BKU	Not used	ANB7316

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

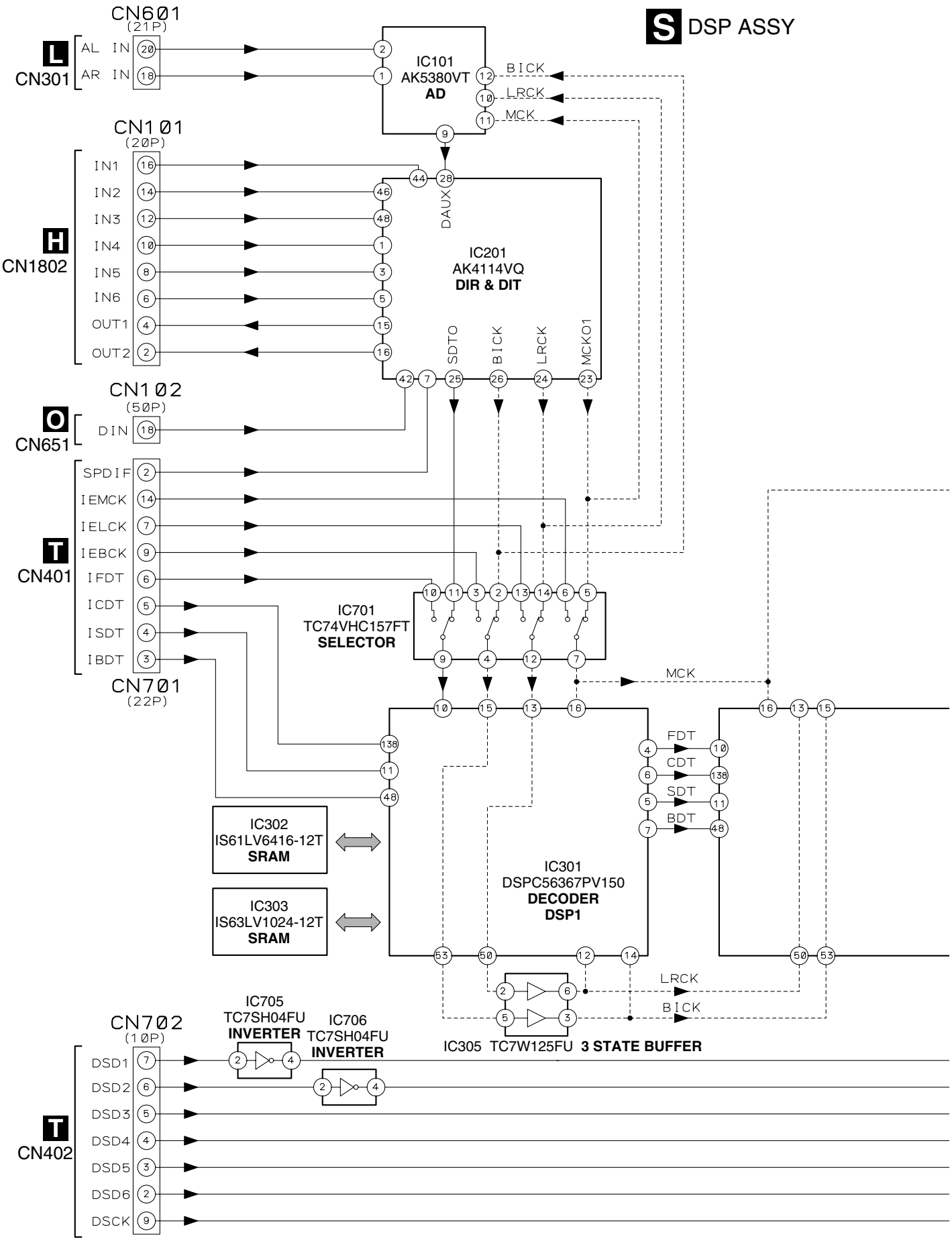
3.1 BLOCK DIAGRAM

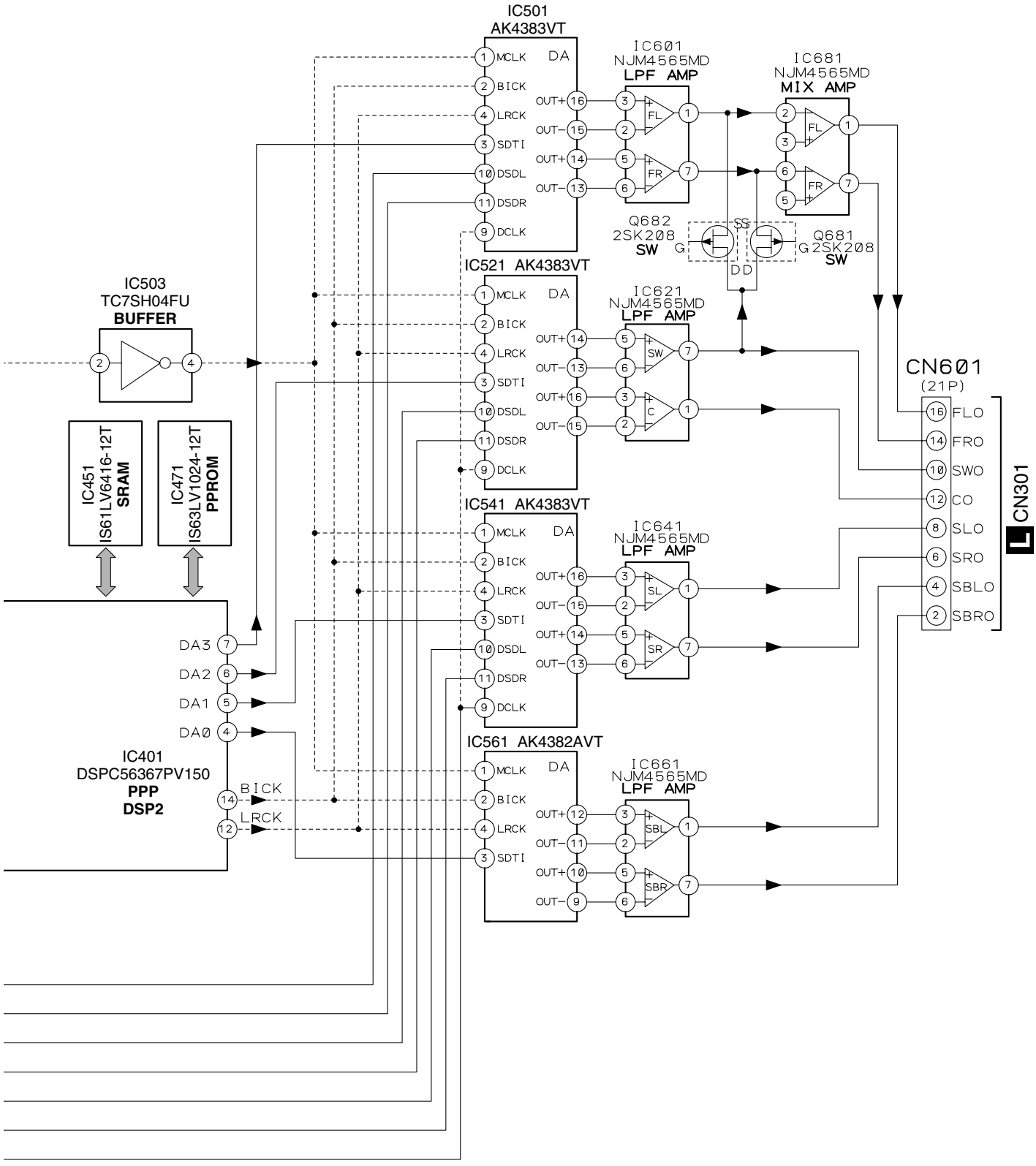
3.1.1 AUDIO BLOCK DIAGRAM




H 2/2 COAXIAL IN ASSY
D 2/2 OPTICAL IN ASSY
Y HEADPHONE ASSY
PHONES
CN1951 (3P)
U 2/2 DISPLAY ASSY
CN3007 (3P)
CN3001 (11P)
AJ PRIMARY ASSY
CN2002 (11P)
CN2004 (5P)
CN4613 (5P)
HP L
IC501 AK4383VT
IC601 (1/2) NJM4565MD LPF Amp.
IC681 (1/2) NJM4565MD MIX Amp.
IC641 (1/2) NJM4565MD LPF Amp.
IC541 AK4383VT
IC561 AK4383VT
IC661 (1/2) 1 NJM4565MD LPF Amp.
IC621 (1/2) 1 NJM4565MD LPF Amp.
IC521 AK4383VT
IC621 (2/2) 7 NJM4565MD LPF Amp.
FL
SL
SBL
C
SW
CN101 (2/2)(20P)
CN1802 (2/2)(20P)
CN1801 (2/2)(9P)
CN1701 (2/2)(9P)
JA1703
JA1704
OUT1
OUT2
DOUT1
DOUT2
CN701 (22P)
CN401 (22P)
CN702 (10P)
CN402 (10P)
T 1394 ASSY
Refer to "3.1.3 1394 BLOCK DIAGRAM".
The details please refer to next page.
L MAIN CONTROL ASSY
P POWER AMP IN ASSY
Z POWER AMP-L ASSY
IC711 (2/2) UPC4570G2
IC713 (2/2) UPC4570G2
IC713 (2/2) UPC4570G2
IC712 UPC4570G2
CN801 (24P)
CN4001 (24P)
CN4003 (17P)
CN4401 (17P)
IC4101 PA9009A Power Amp.
IC4201 PA9009A Power Amp.
IC4301 PA9009A Power Amp.
CN4601 (2P)
CN4603 (2P)
CN4602 (2P)
RY4601
RY4602
RY4603
RY4604
CN4611
CN4612
FRONT
SURROUND
SURROUND BACK
CENTER
SPEAKERS
Y2
Y3
Y1
CN4002 (19P)
CN4402 (19P)
CN4453 (10P)
CN4454 (10P)
IC4451 PA9009A Power Amp.
AD SP/PS ASSY
JA113 (2/2)
JA112 (2/2)
CD-R/ TAPE1 OUT
MD/ TAPE2 OUT
CD-R REC
MD REC
AA POWER AMP-R ASSY
AB POWER AMP-C ASSY
CN103 (9P)
B 2/2 V-AUDIO IN ASSY
CN1404 (9P)
IC1541 UPC4570G2 SW Amp.
IC401 M62429FP MR Volume
CN1405 (2/2)(17P)
CN1204 (2/2)(17P)
CN1205 (1/3)
MULTI-ROOM & SOURCE OUT
MR L
V1/OUT
V2/OUT
MRL
V1OL
V2OL
E INPUT CONNECT ASSY
CN1408 (9P)
CN1205 (3/3)
VCR1 OUT
CN1308 (9P)
CN1201 (2/2)
VCR2 OUT
A 7.1 CH I/O ASSY
CN1303
CN1304
SUB WOOFER
CENTER
FRONT
SURROUND
SURROUND BACK
PRE OUT

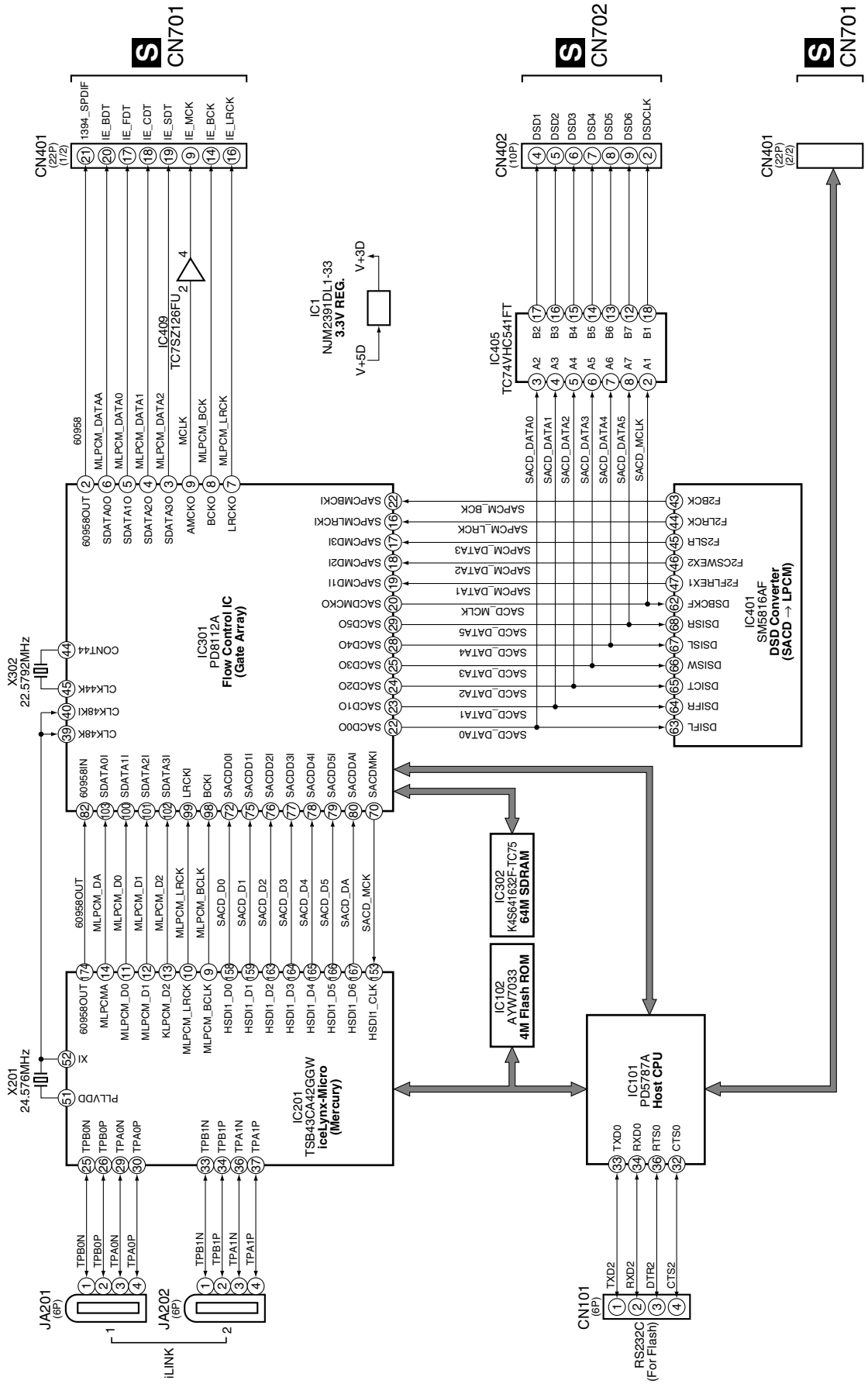
3.1.2 DSP BLOCK DIAGRAM



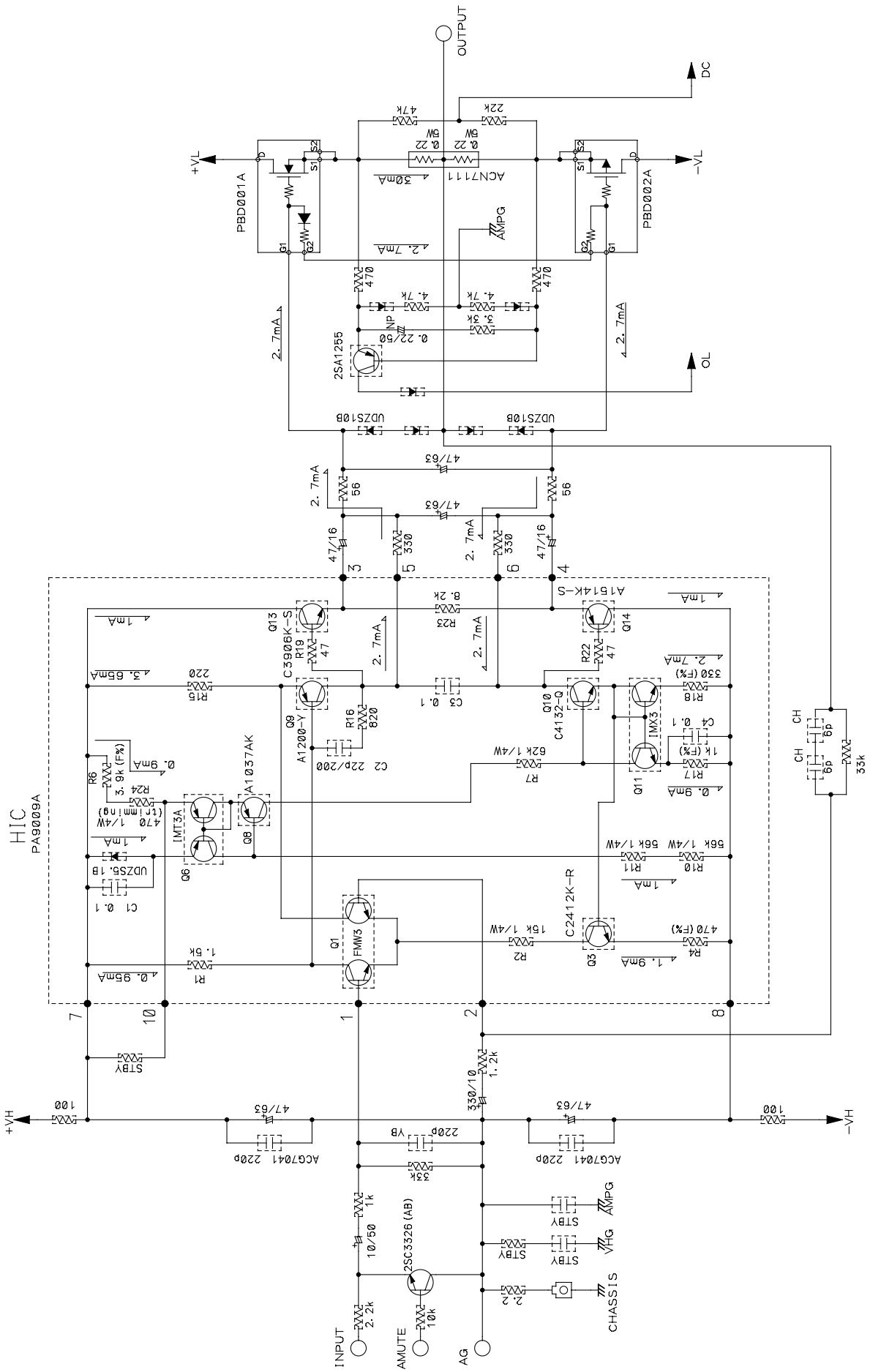

CLOCK LINE
DATA LINE
IC501
AK4383VT
IC601
NJM4565MD
LPF AMP
IC681
NJM4565MD
MIX AMP
Q682
2SK208
SW
Q681
2SK208
SW
IC521 AK4383VT
IC621
NJM4565MD
LPF AMP
IC503
TC7SH04FU
BUFFER
CN601
(21P)
IC451
IS61LV6416-12T
SRAM
IC471
IS63LV1024-12T
PPROM
IC541 AK4383VT
IC641
NJM4565MD
LPF AMP
IC561 AK4382AVT
IC661
NJM4565MD
LPF AMP
IC401
DSPC56367PV150
PPP
DSP2
CN301
MCLK
BICK
LRCK
SDTI
DSDL
DSDR
DCLK
DA
OUT+
OUT−
FL
FR
SW
C
SL
SR
SBL
SBR
SS
DD
G
FLO
FRO
SWO
CO
SLO
SRO
SBLO
SBRO
DA3
DA2
DA1
DA0

3.1.3 1394 BLOCK DIAGRAM

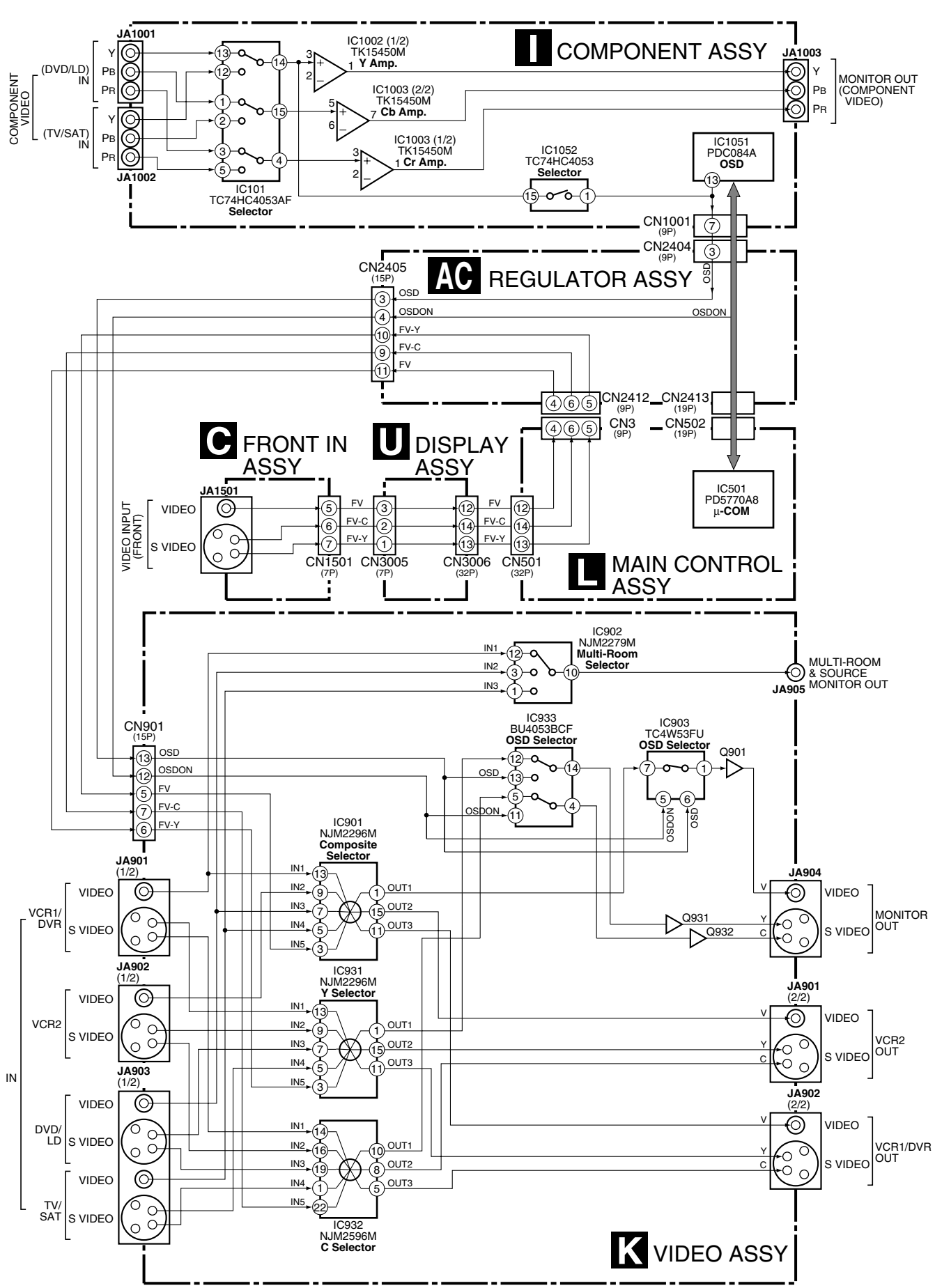
T 1394 ASSY



3.1.4 POWER AMP BLOCK DIAGRAM



3.1.5 VIDEO BLOCK DIAGRAM



A

B

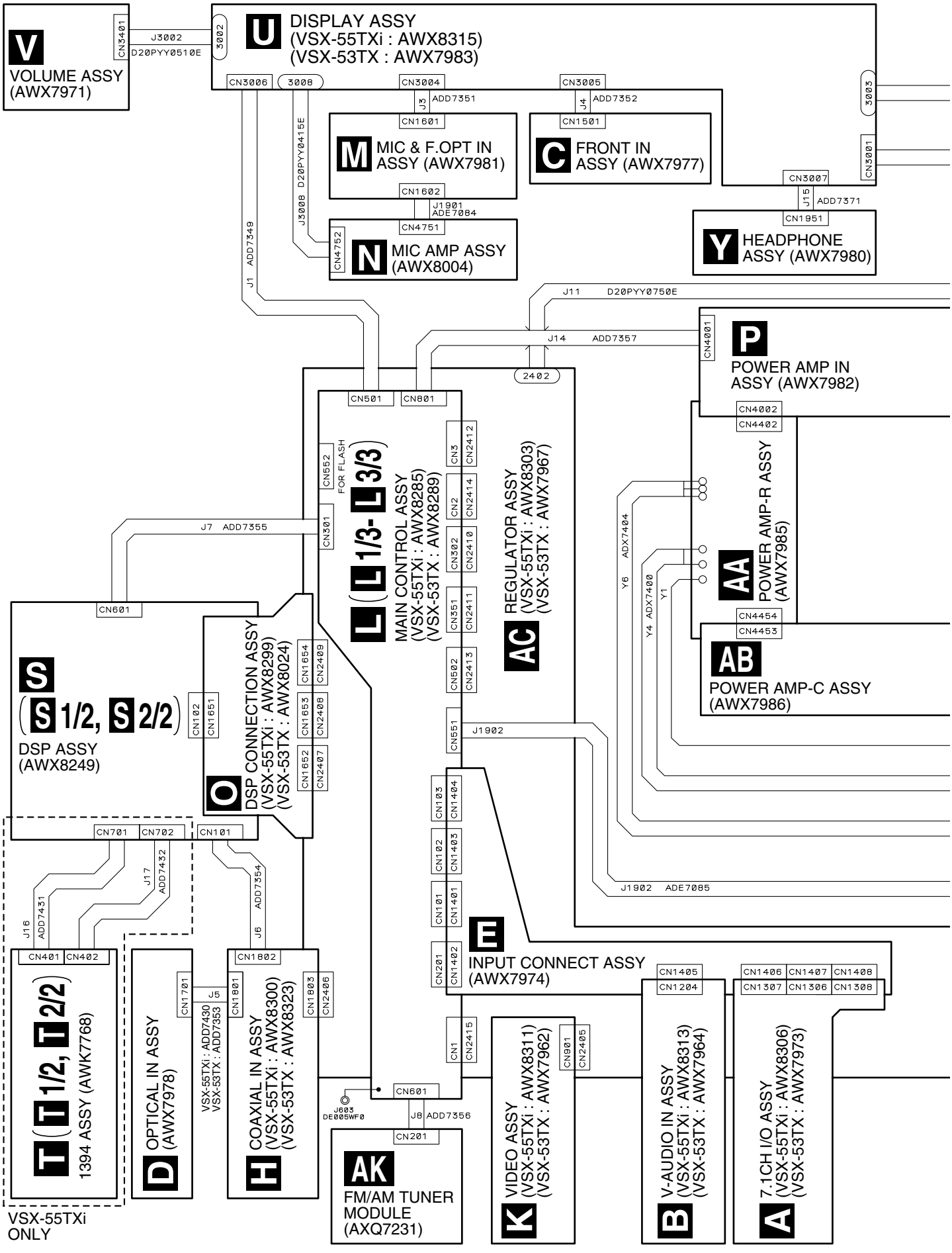
C

D

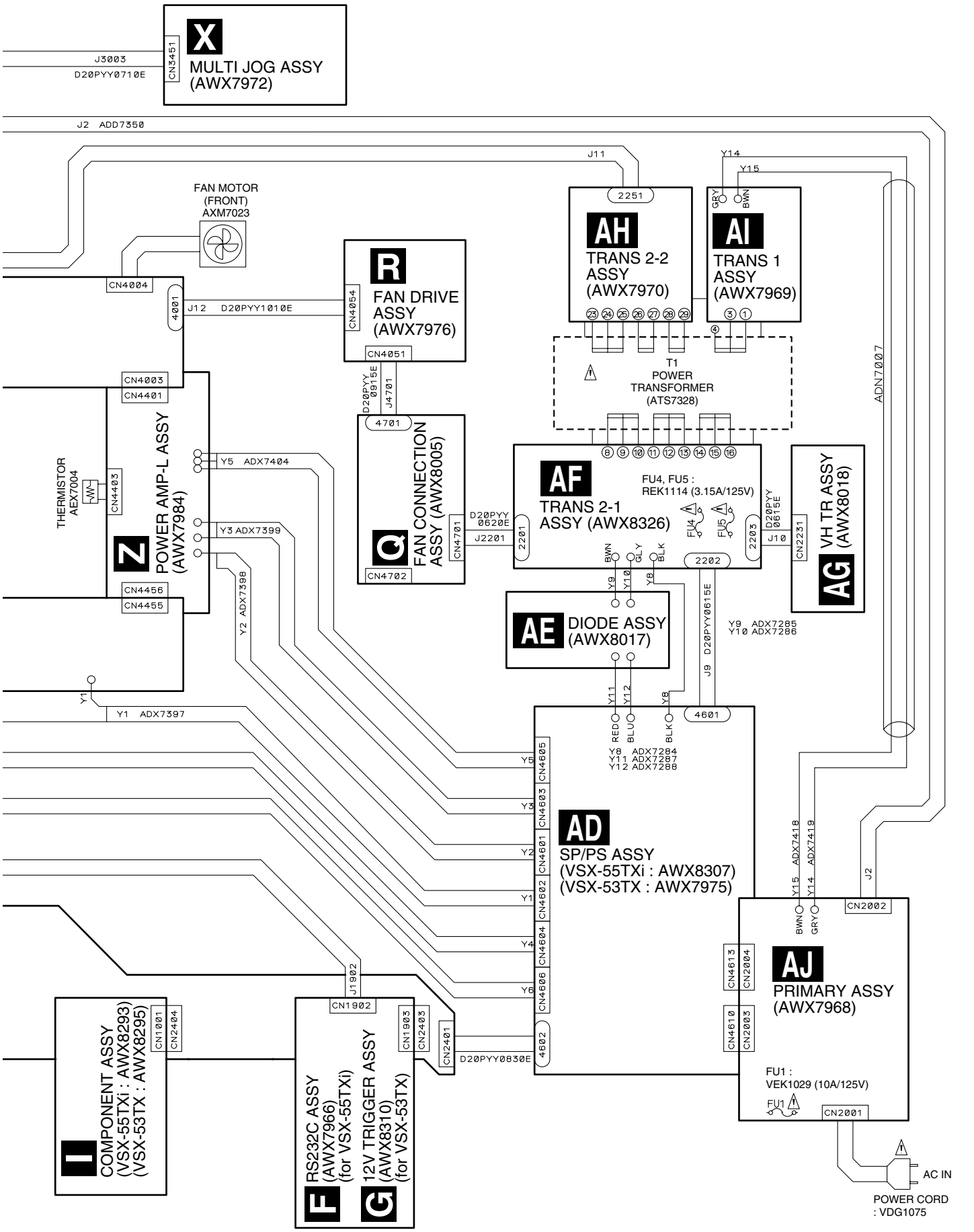
E

F

3.2 OVERALL WIRING DIAGRAM



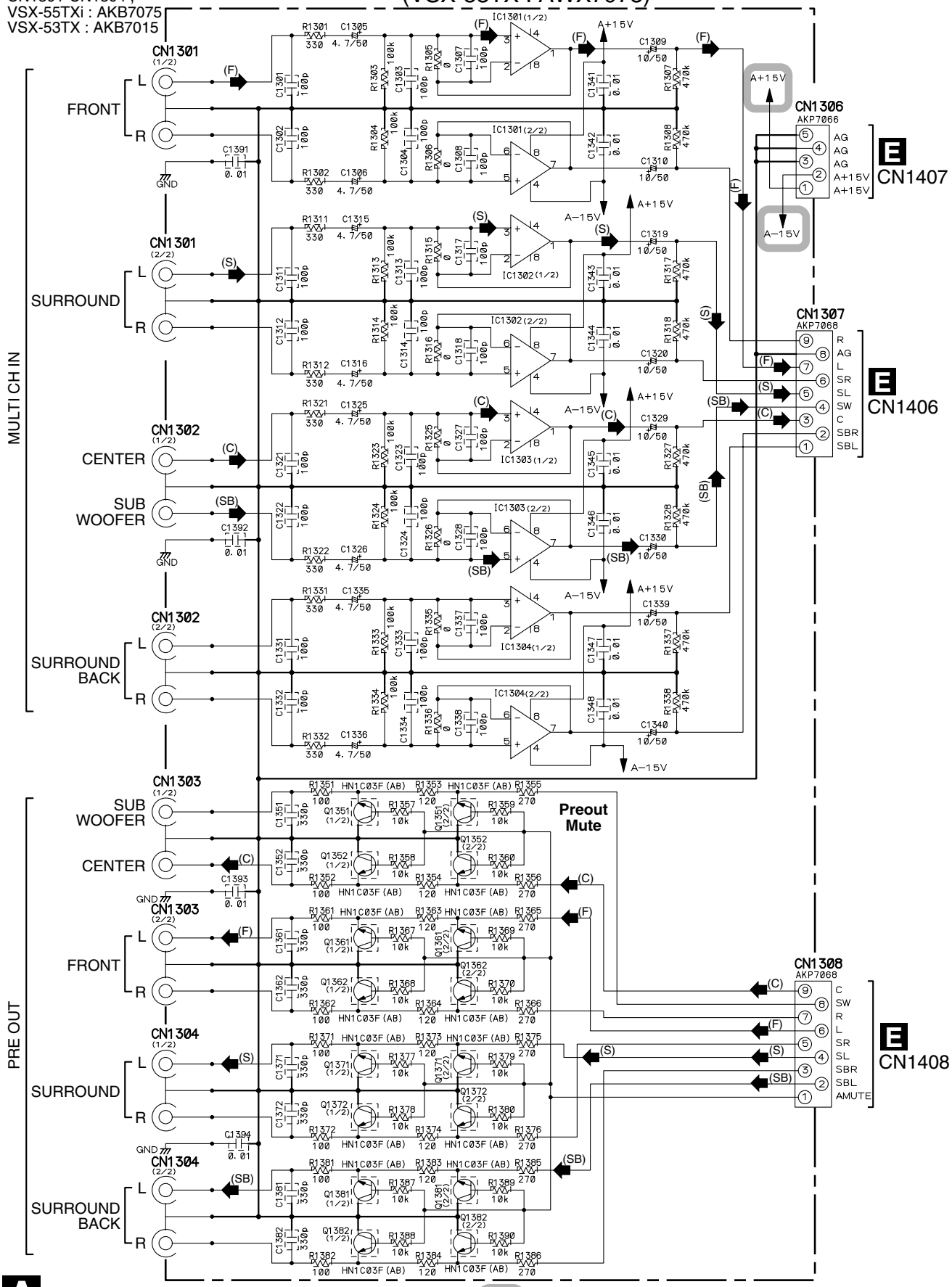
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



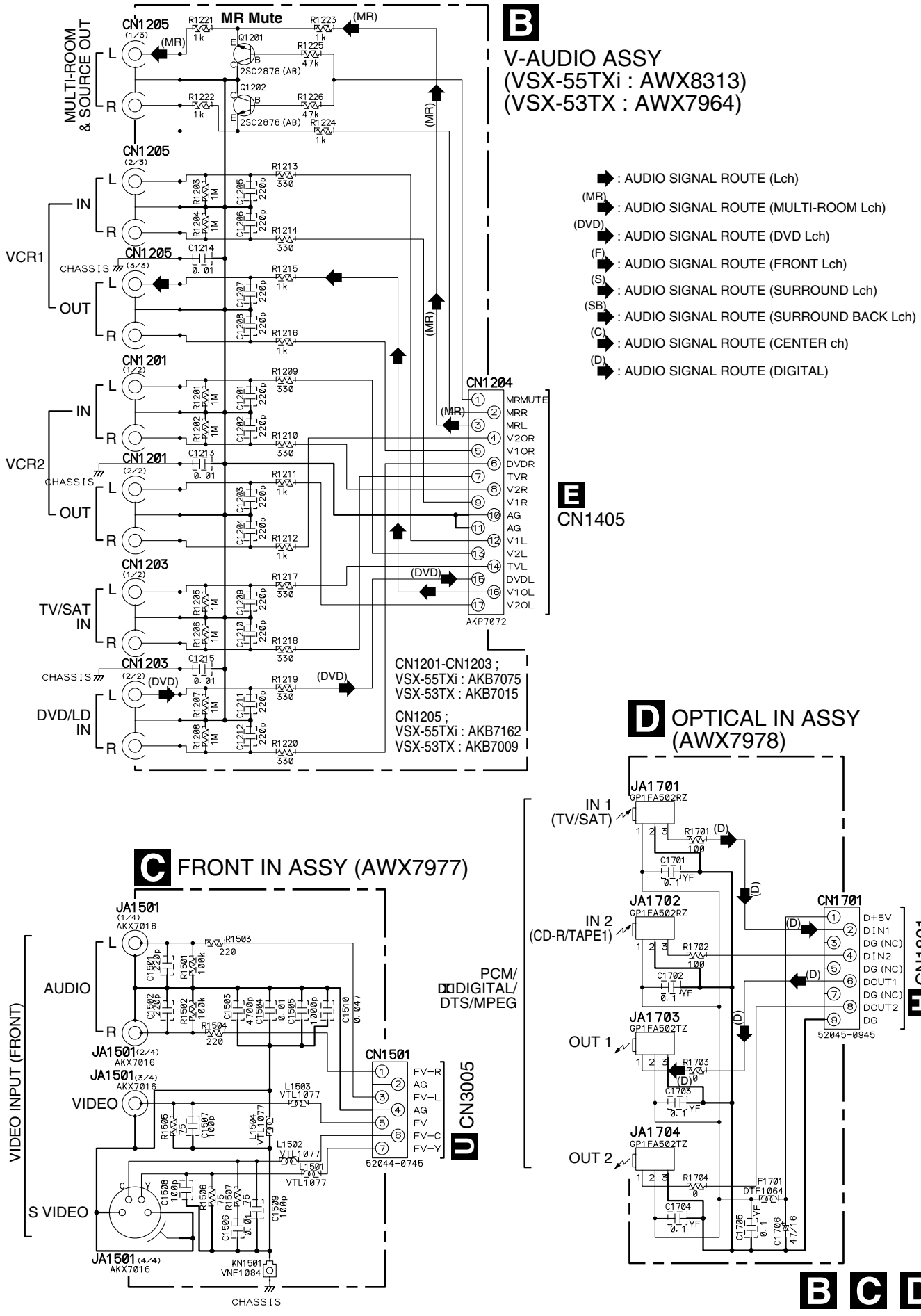
3.3 7.1 CH I/O, V-AUDIO, FRONT IN and OPTICAL IN ASSYS

A 7.1 CH I/O ASSY (VSX-55TXi : AWX8306) (VSX-53TX : AWX7973)

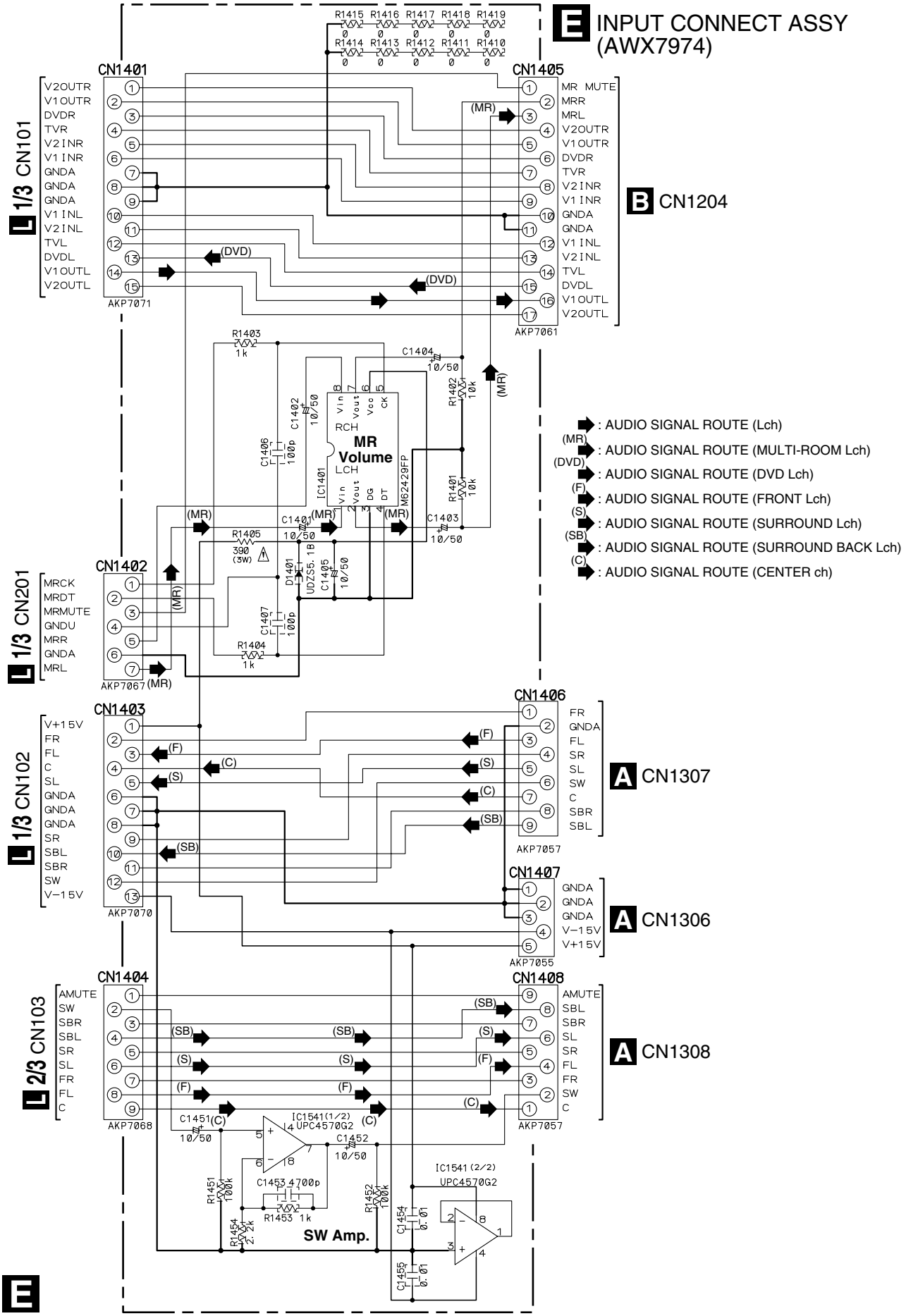
CN1301-CN1304 ;
VSX-55TXi : AKB7075
VSX-53TX : AKB7015



: The power supply is shown with the marked box.

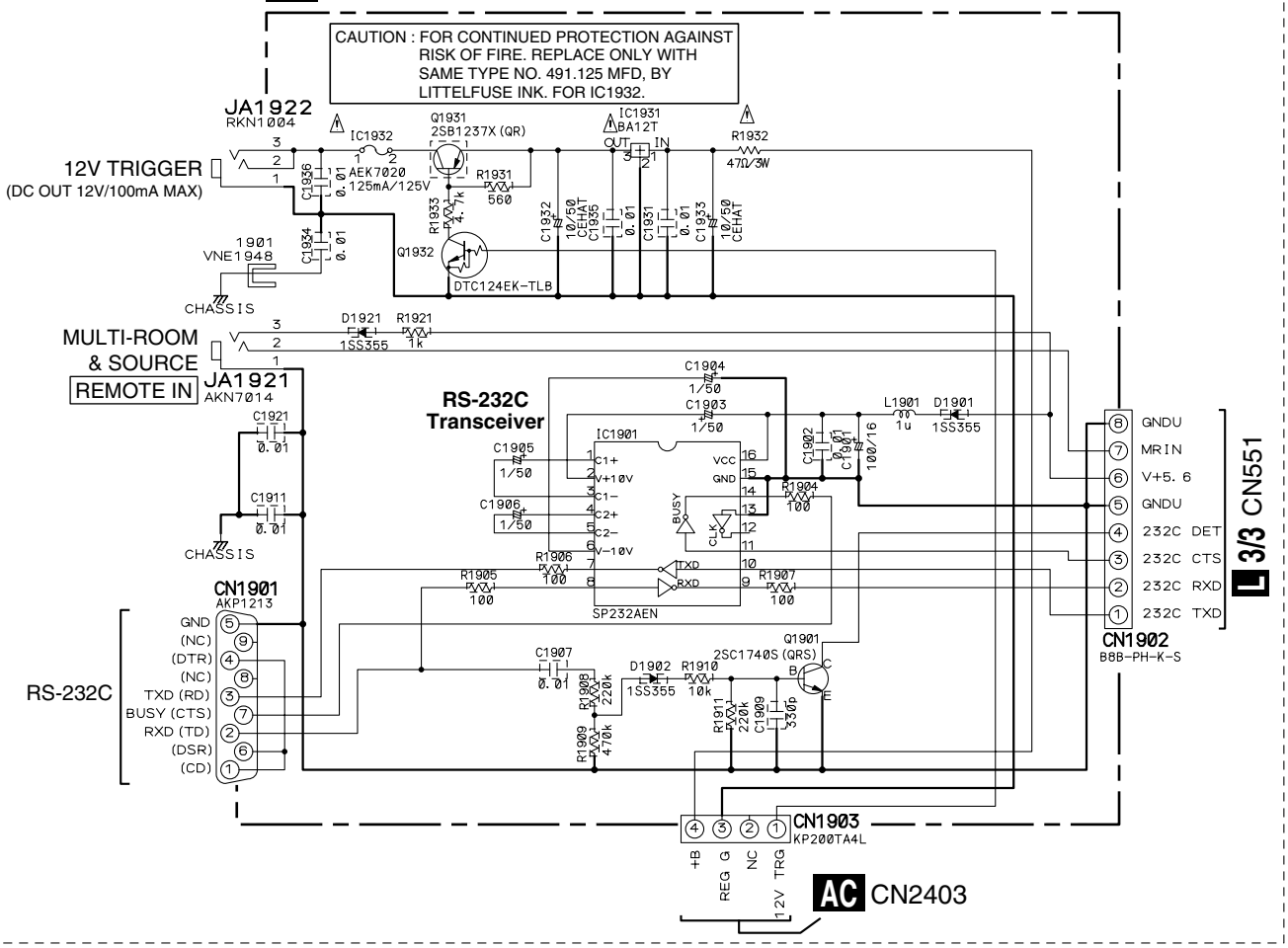

B
V-AUDIO ASSY
(VSX-55TXi : AWX8313)
(VSX-53TX : AWX7964)
: AUDIO SIGNAL ROUTE (Lch)
(MR) : AUDIO SIGNAL ROUTE (MULTI-ROOM Lch)
(DVD) : AUDIO SIGNAL ROUTE (DVD Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
(D) : AUDIO SIGNAL ROUTE (DIGITAL)
MULTI-ROOM & SOURCE OUT
MR Mute
CN1205
2SC2878 (AB)
VCR1
VCR2
TV/SAT IN
DVD/LD IN
CHASSIS
CN1204
MRMUTE
MRR
MRL
V2OR
V1OR
DVDR
TVR
V2R
V1R
AG
V1L
V2L
TVL
DVDL
V1OL
V2OL
AKP7072
E
CN1405
CN1201-CN1203 ;
VSX-55TXi : AKB7075
VSX-53TX : AKB7015
CN1205 ;
VSX-55TXi : AKB7162
VSX-53TX : AKB7009
C FRONT IN ASSY (AWX7977)
JA1501
AKX7016
AUDIO
VIDEO
S VIDEO
VIDEO INPUT (FRONT)
CN1501
FV-R
AG
FV-L
AG
FV
FV-C
FV-Y
52044-0745
CN3005
KN1501
VNF1084
D OPTICAL IN ASSY
(AWX7978)
JA1701
JA1702
JA1703
JA1704
GP1FA502RZ
GP1FA502TZ
IN 1
(TV/SAT)
IN 2
(CD-R/TAPE1)
OUT 1
OUT 2
PCM/
DIGITAL/
DTS/MPEG
CN1701
D+5V
DIN1
DG (NC)
DIN2
DG (NC)
DOUT1
DG (NC)
DOUT2
DG
52045-0945
CN1801
F1701
DTF1064
B C D

3.4 INPUT CONNECT, RS232C and 12V TRIGGER ASSYS



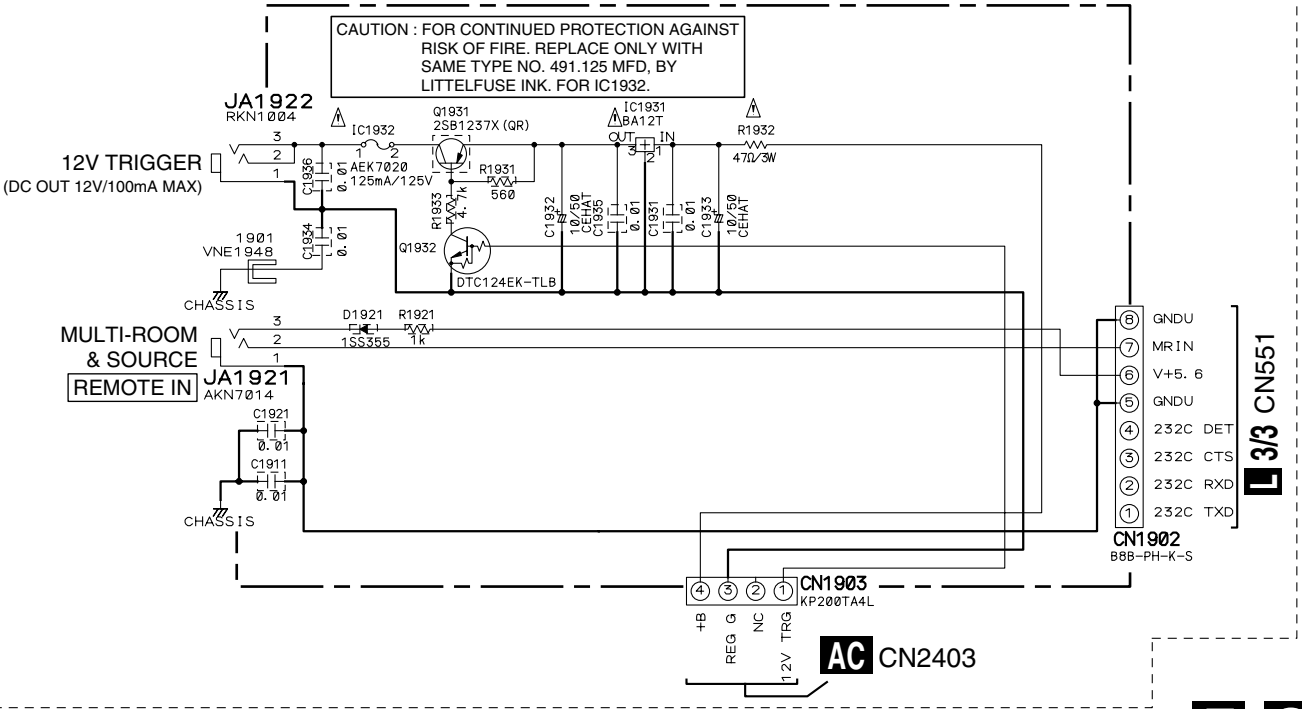
VSX-55TXi ONLY

F RS232C ASSY (AWX7966)



VSX-53TX ONLY

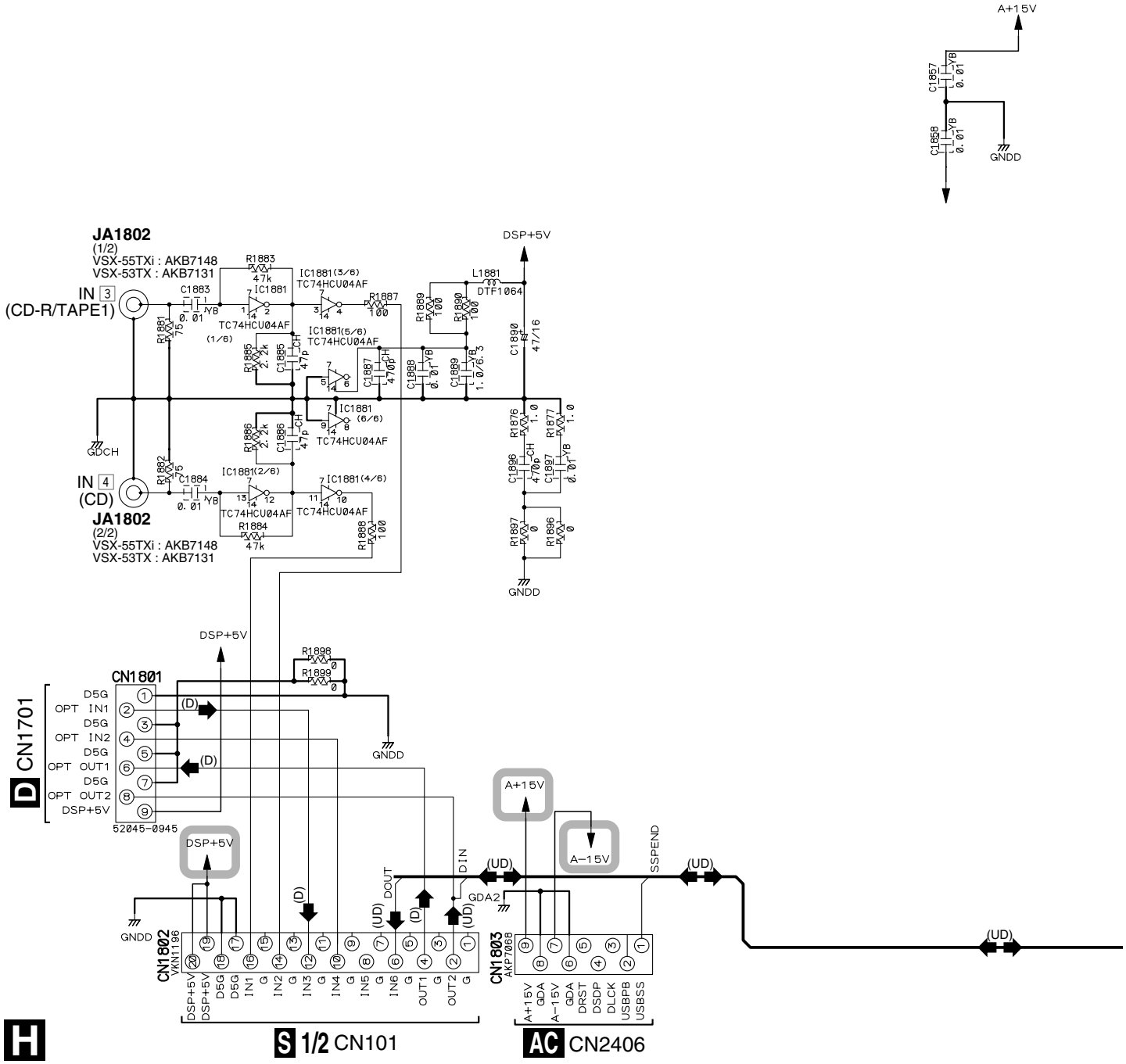
G 12V TRIGGER ASSY (AWX8310)



F G

3.5 COAXIAL IN ASSY

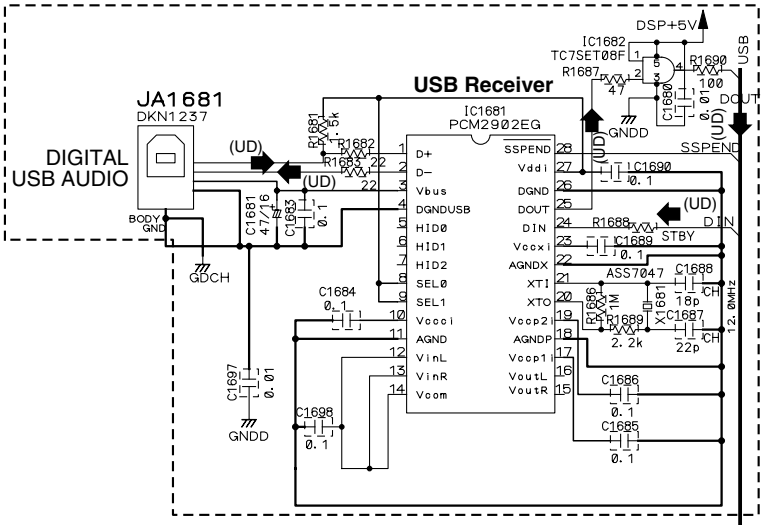
H COAXIAL IN ASSY
(VSX-55TXi : AWX8300)
(VSX-53TX : AWX8323)



(D) : AUDIO SIGNAL ROUTE (DIGITAL)

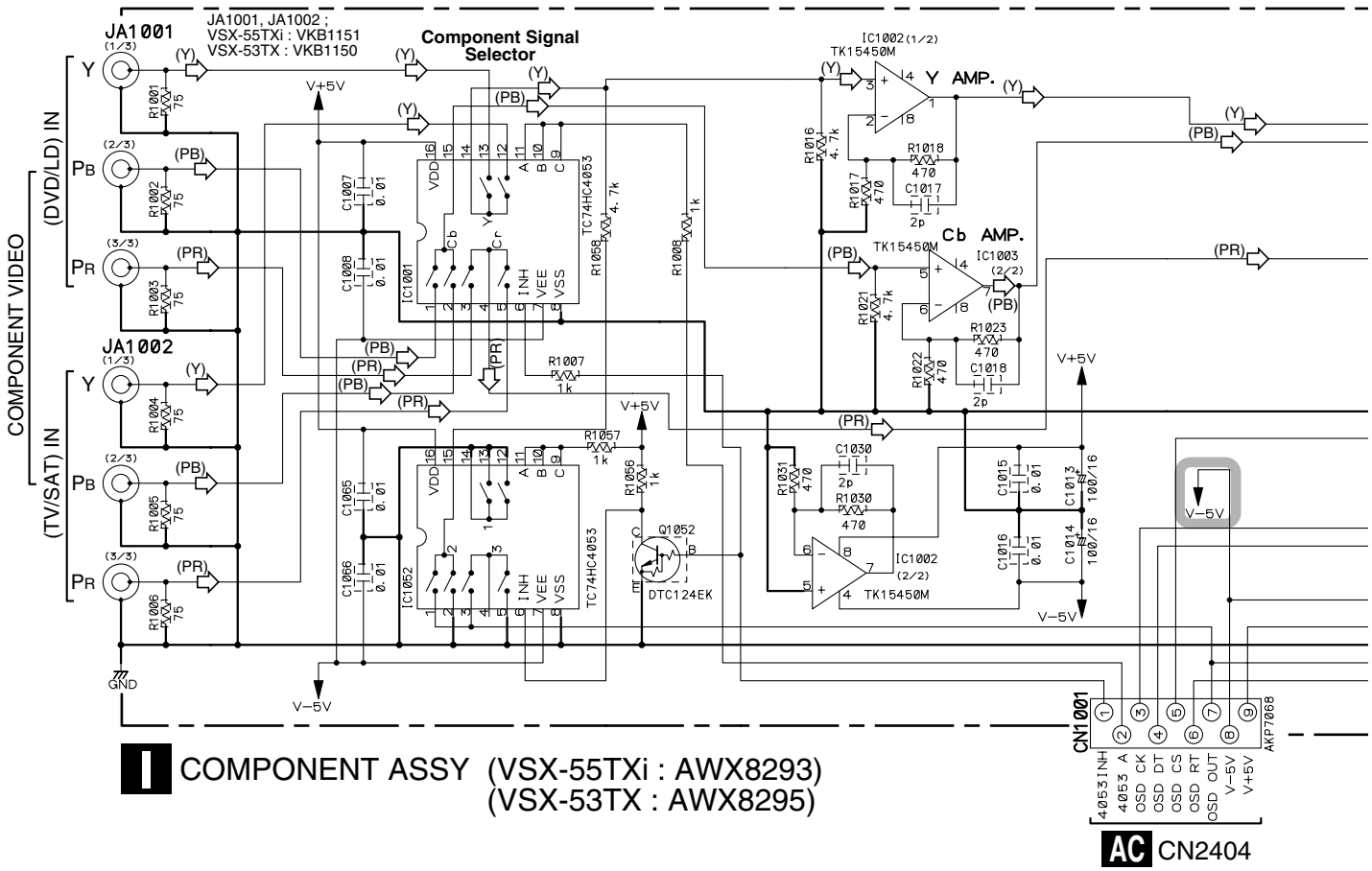
(UD) : AUDIO SIGNAL ROUTE (USB DIGITAL)

VSX-55TXi ONLY



: The power supply is shown with the marked box.

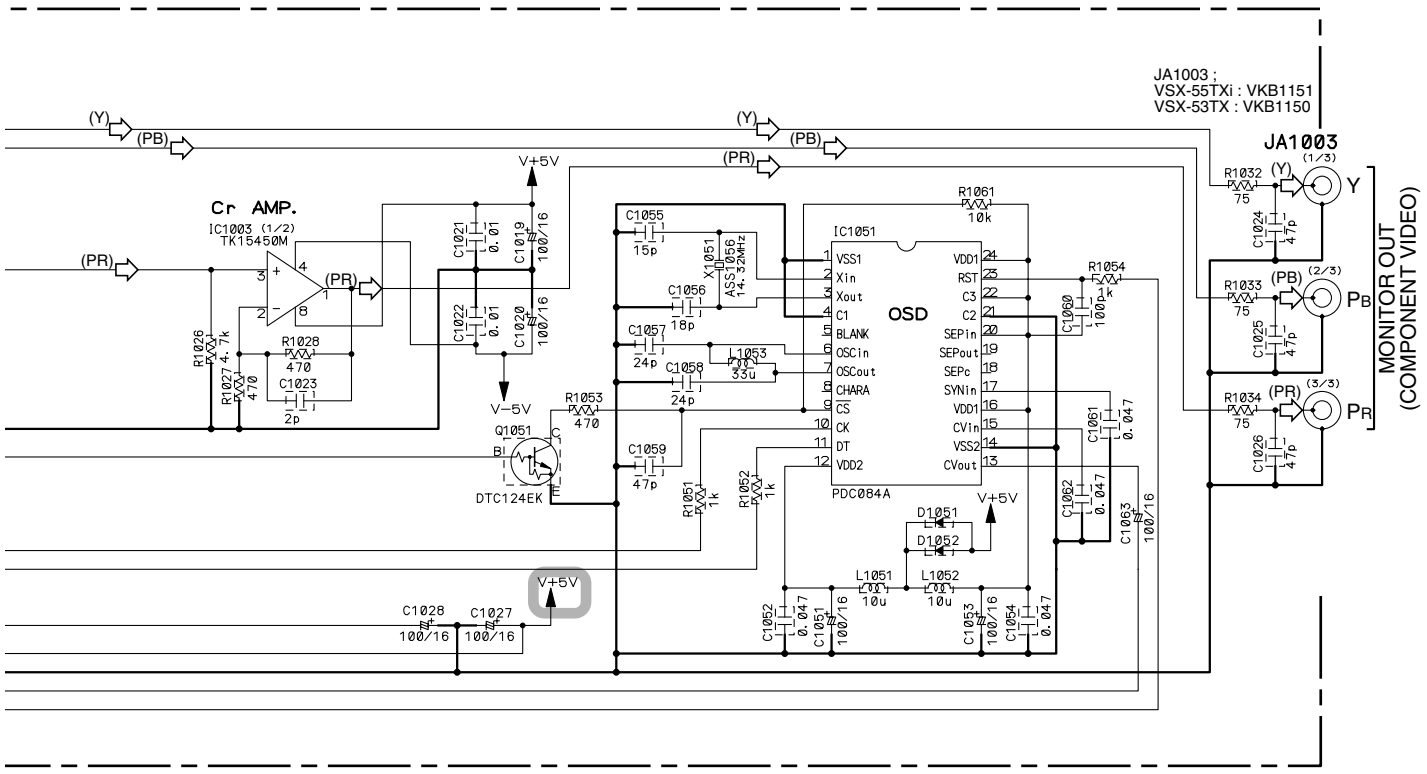
3.6 COMPONENT ASSY



COMPONENT ASSY (VSX-55TXi : AWX8293)
(VSX-53TX : AWX8295)

AC CN2404

: The power supply is shown with the marked box.



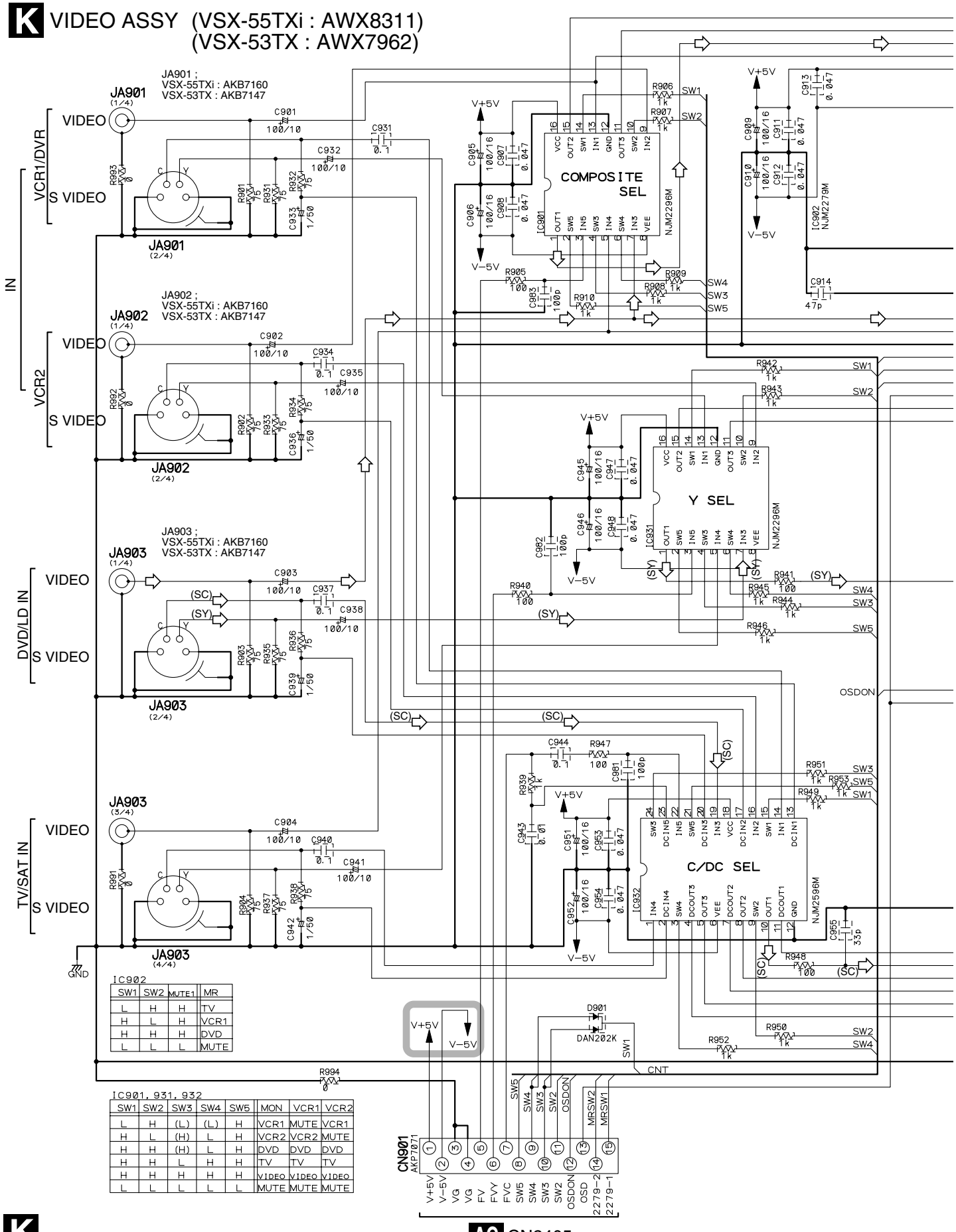
(Y) : VIDEO SIGNAL ROUTE (Y)

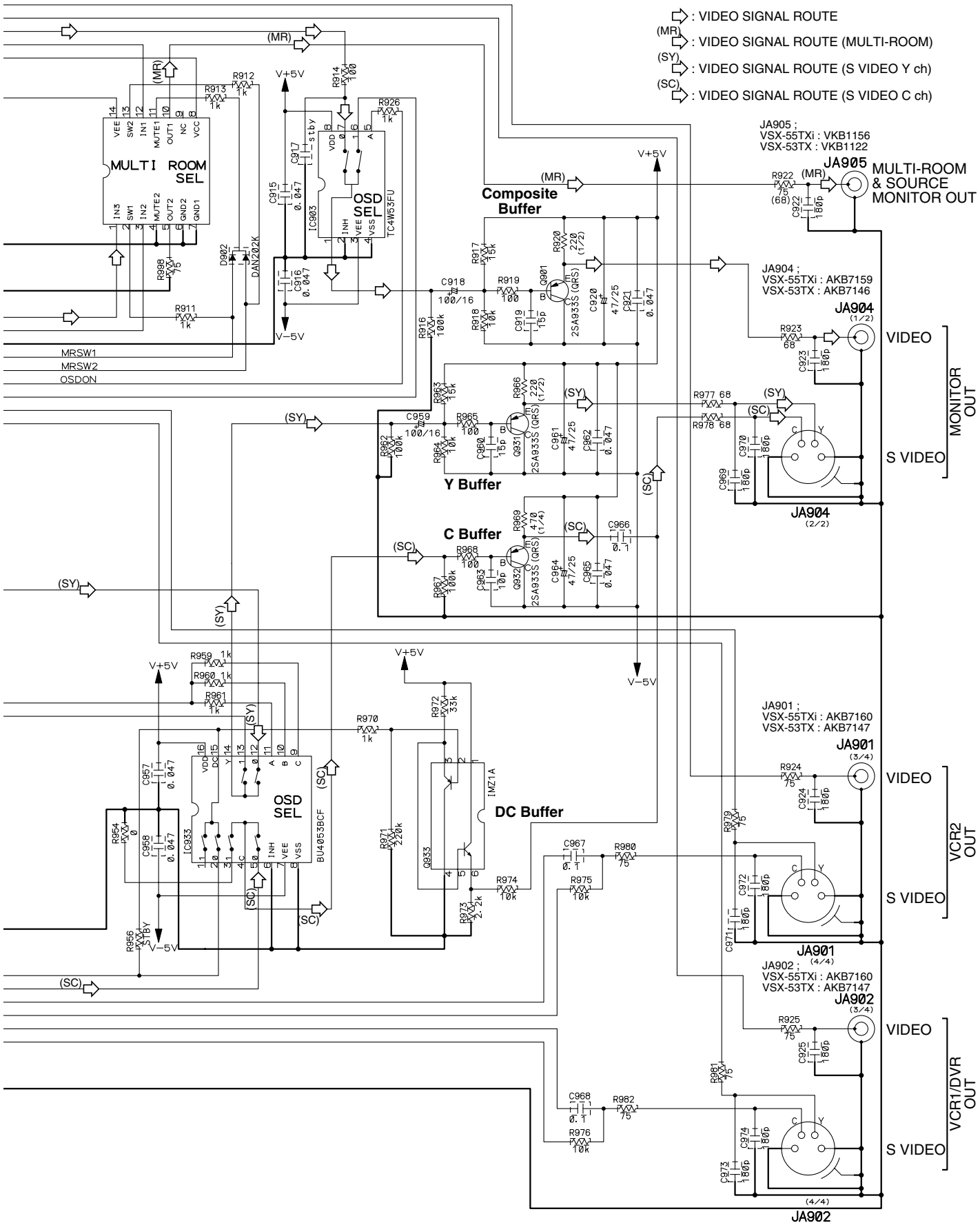
(PB) : VIDEO SIGNAL ROUTE (PB)

(PR) : VIDEO SIGNAL ROUTE (PR)

3.7 VIDEO ASSY

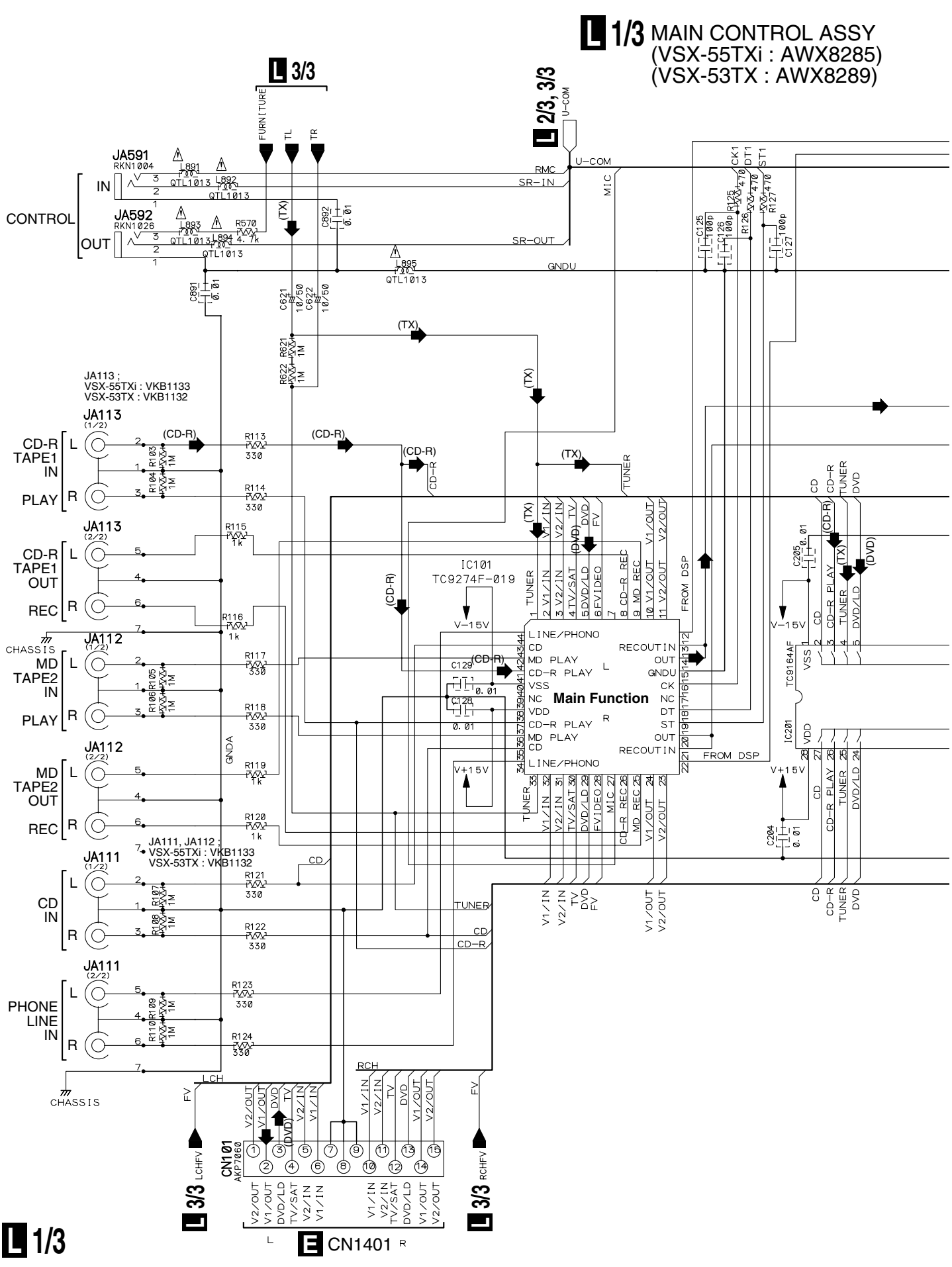
K VIDEO ASSY (VSX-55TXi : AWX8311)
(VSX-53TX : AWX7962)

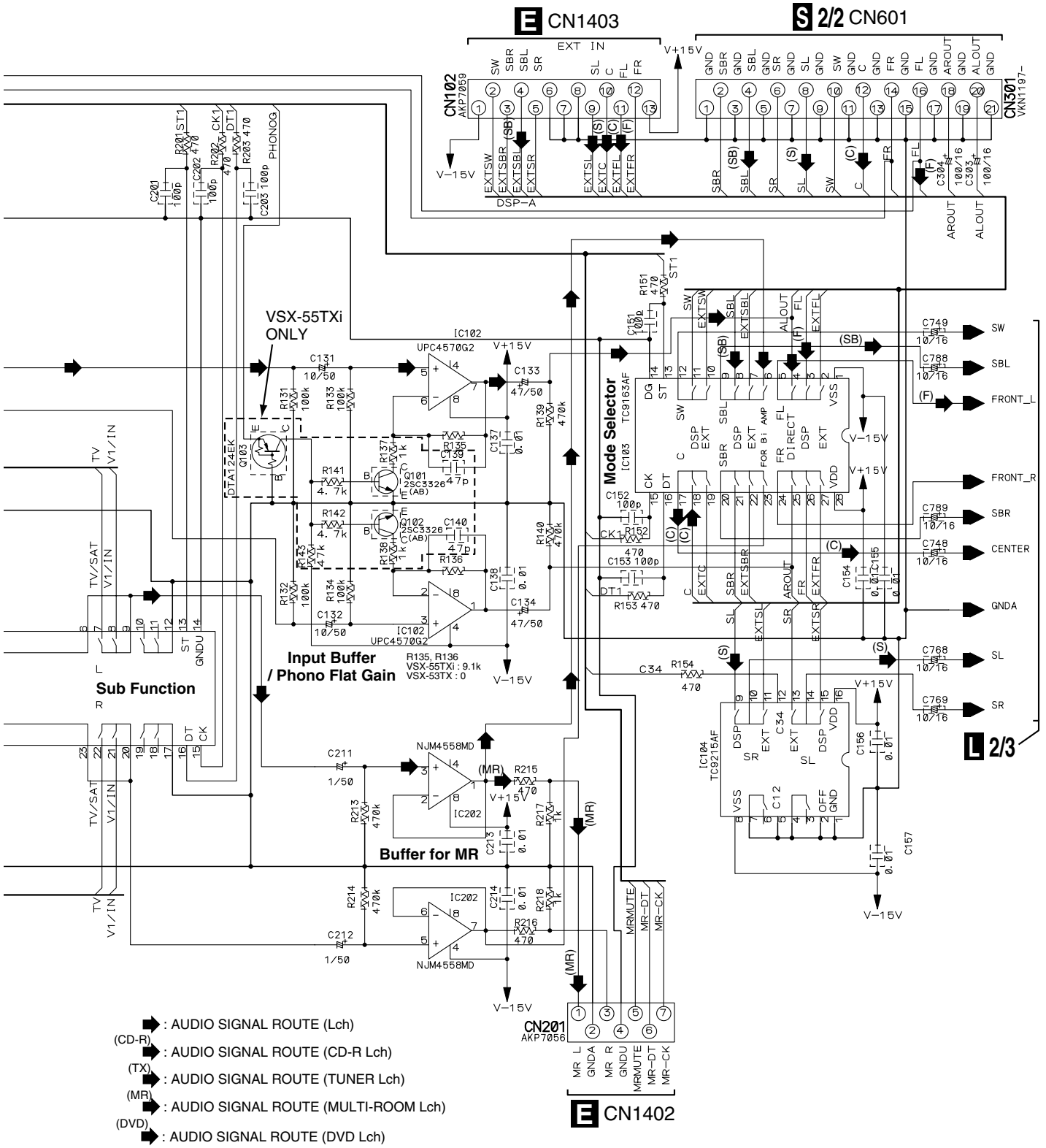




: The power supply is shown with the marked box.

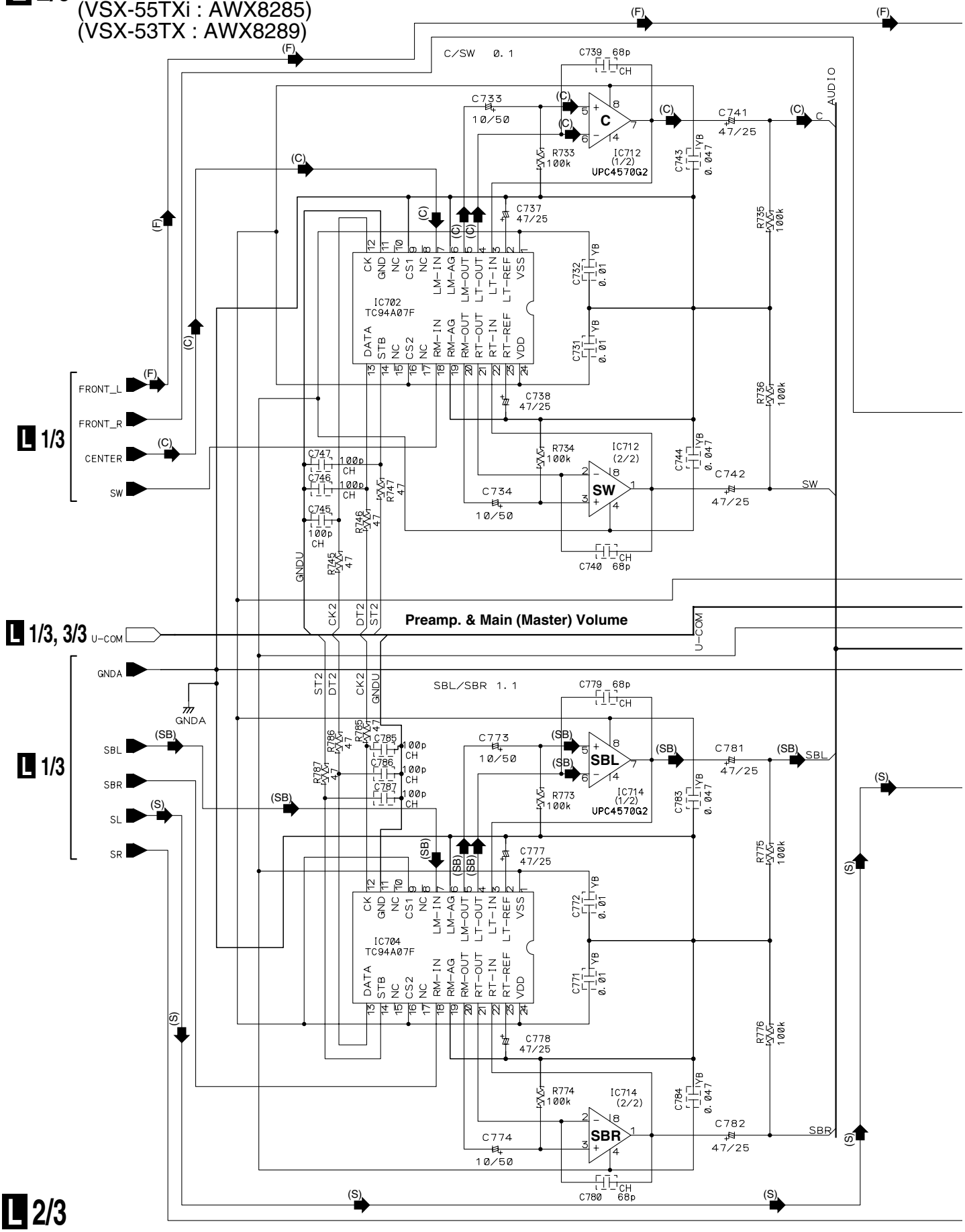
3.8 MAIN CONTROL ASSY (1/3)



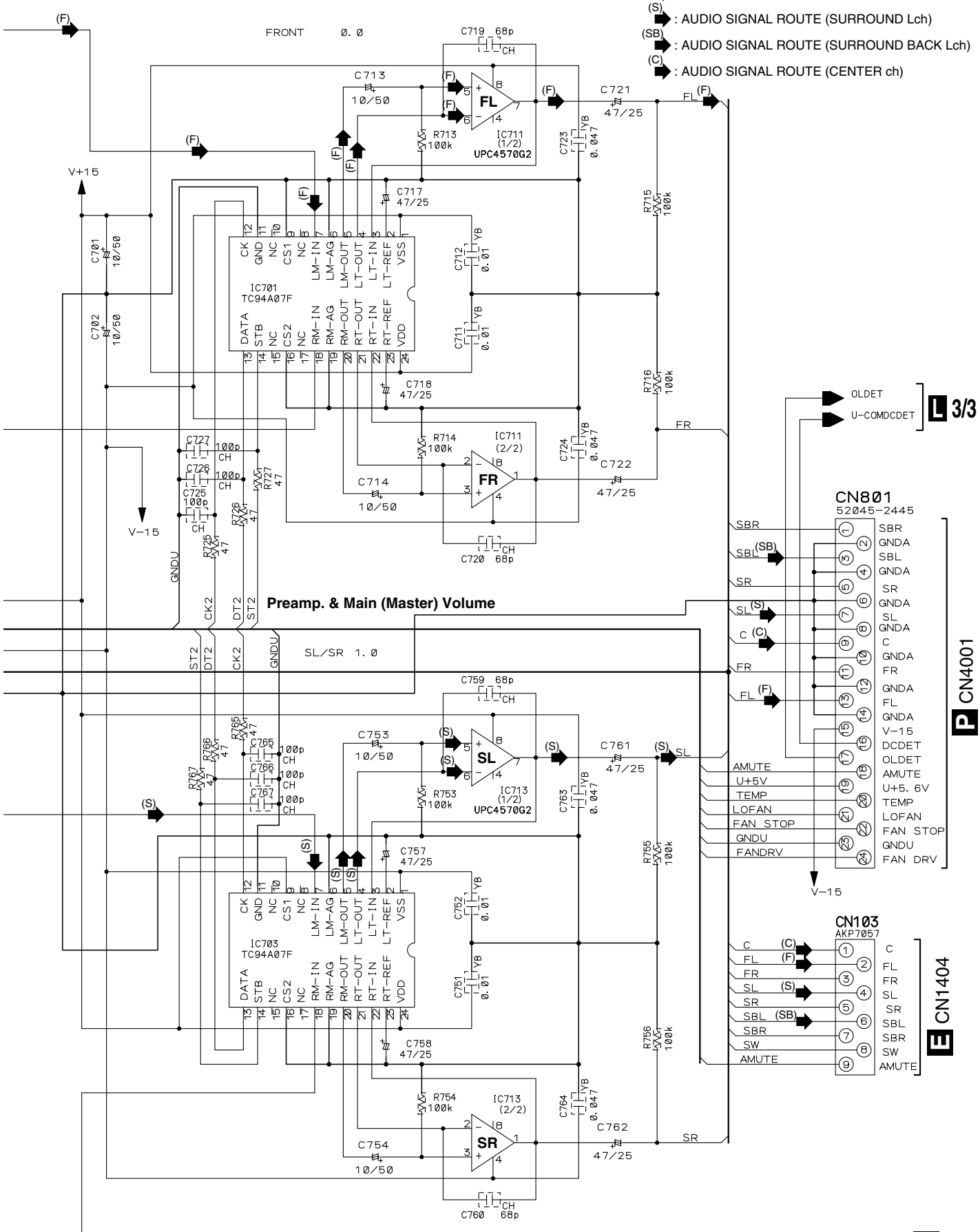

E CN1403
EXT IN
S 2/2 CN601
CN102
AKP7059
CN301
VKN1197-
V+15V
V-15V
DSP-A
VSX-55TXi
ONLY
IC102
UPC4570G2
Mode Selector
TC9163AF
IC103
Input Buffer
/ Phono Flat Gain
R135, R136
VSX-55TXi : 9.1k
VSX-53TX : 0
Sub Function
Buffer for MR
NJM4558MD
IC202
IC104
TC9215AF
CN201
AKP7056
CN1402
L 2/3
L 1/3
SW
SBL
FRONT_L
FRONT_R
SBR
CENTER
GNDA
SL
SR
AROUT
ALOUT
PHONOG
: AUDIO SIGNAL ROUTE (Lch)
(CD-R) : AUDIO SIGNAL ROUTE (CD-R Lch)
(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)
(MR) : AUDIO SIGNAL ROUTE (MULTI-ROOM Lch)
(DVD) : AUDIO SIGNAL ROUTE (DVD Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)

3.9 MAIN CONTROL ASSY (2/3)

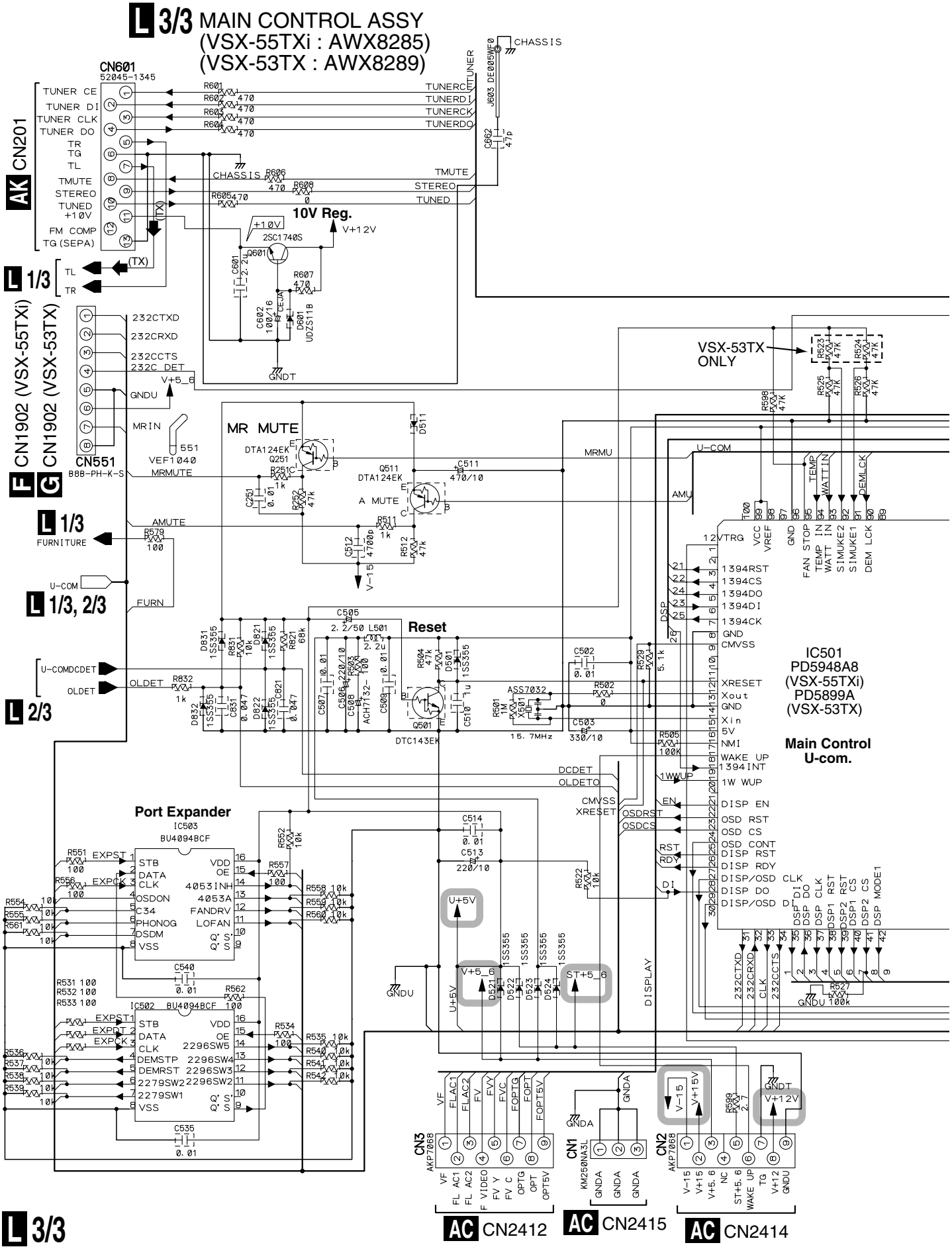
L 2/3 MAIN CONTROL ASSY
(VSX-55TXi : AWX8285)
(VSX-53TX : AWX8289)

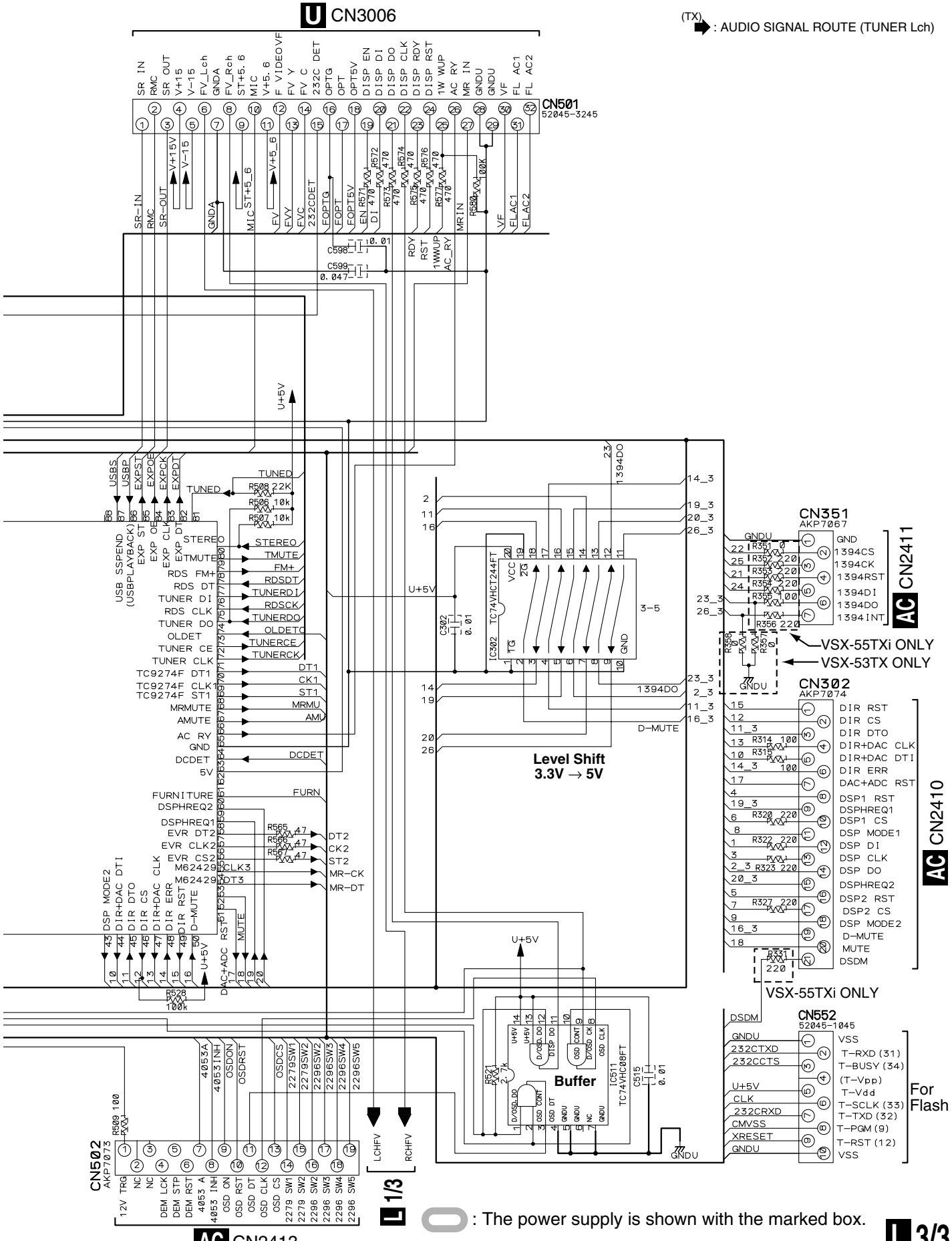


(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)

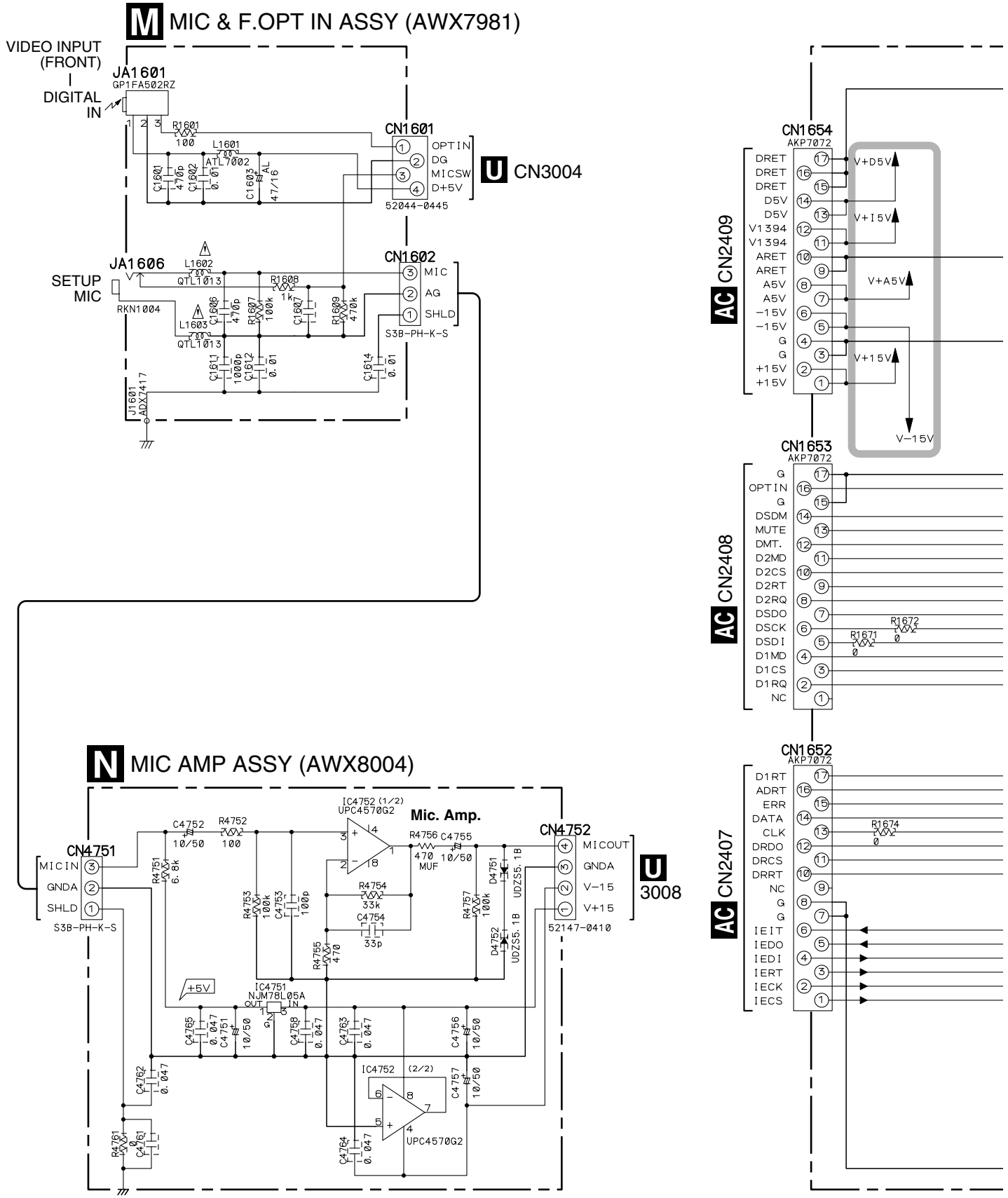


3.10 MAIN CONTROL ASSY (3/3)



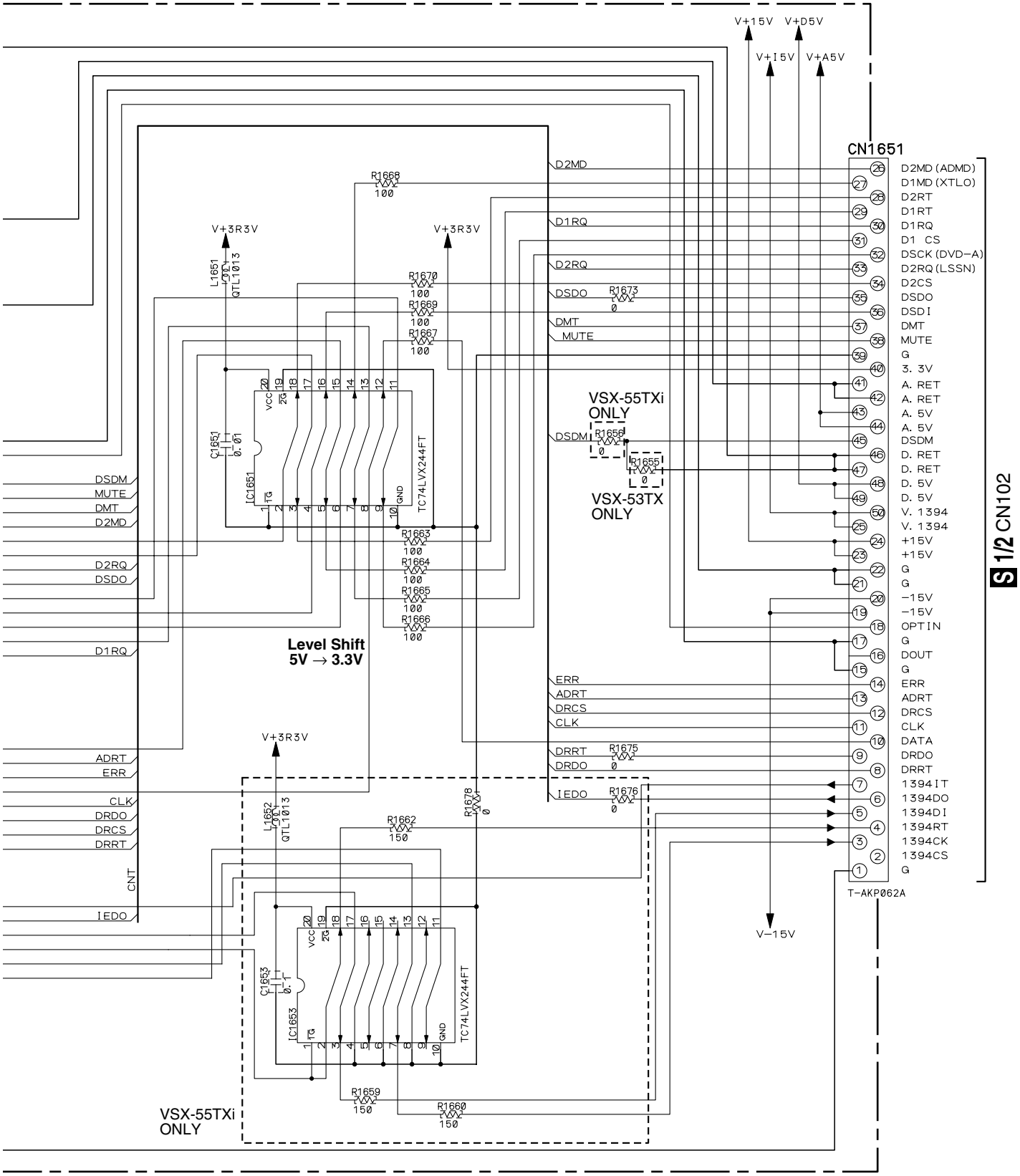

U CN3006
(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)
CN501
52045-3245
SR IN
RMC
SR OUT
V+15
V-15
FV_Lch
GNDA
FV_Rch
ST+5.6
MIC
V+5.6
F VIDEO VF
FV Y
FV C
232C DET
OPTG
OPT
OPT5V
DISP EN
DISP DI
DISP DO
DISP CLK
DISP RDY
DISP RST
1W WUP
AC RY
MR IN
GNDU
VF
FL AC1
FL AC2
C598 0.01
C599 0.047
U+5V
TUNED
STEREO
TMUTE
FM+
RDSDT
TUNERDI
RDSCK
TUNERDO
OLDETC
TUNERCE
TUNERCK
DT1
CK1
ST1
MRMU
AMU
DCDET
FURN
DT2
CK2
ST2
MR-CK
MR-DT
MUTE
D-MUTE
Level Shift
3.3V → 5V
IC302 TC74VHCT244FT
C302 0.01
1394DO
D-MUTE
CN351
AKP7067
GND
1394CS
1394CK
1394RST
1394DI
1394DO
1394INT
AC CN2411
VSX-55TXi ONLY
VSX-53TX ONLY
CN302
AKP7074
DIR RST
DIR CS
DIR DTO
DIR+DAC CLK
DIR+DAC DTI
DIR ERR
DAC+ADC RST
DSP1 RST
DSPHREQ1
DSP1 CS
DSP MODE1
DSP DI
DSP CLK
DSP DO
DSPHREQ2
DSP2 RST
DSP2 CS
DSP MODE2
D-MUTE
MUTE
DSDM
AC CN2410
VSX-55TXi ONLY
CN552
52045-1045
VSS
T-RXD (31)
T-BUSY (34)
(T-Vpp)
T-Vdd
T-SCLK (33)
T-TXD (32)
T-PGM (9)
T-RST (12)
VSS
For Flash
Buffer
IC511 TC74VHC08FT
C515 0.01
CN502
AKP7073
12V TRG
DEM LCK
DEM STP
DEM RST
4053 A
4053 INH
OSD ON
OSD RST
OSD DT
OSD CLK
OSD CS
2279 SW1
2279 SW2
2296 SW2
2296 SW3
2296 SW4
2296 SW5
LCHFV
RCHFV
L 1/3
AC CN2413
: The power supply is shown with the marked box.
L 3/3

3.11 MIC & F.OPT IN, MIC AMP and DSP CONNECTION ASSYS



M N O

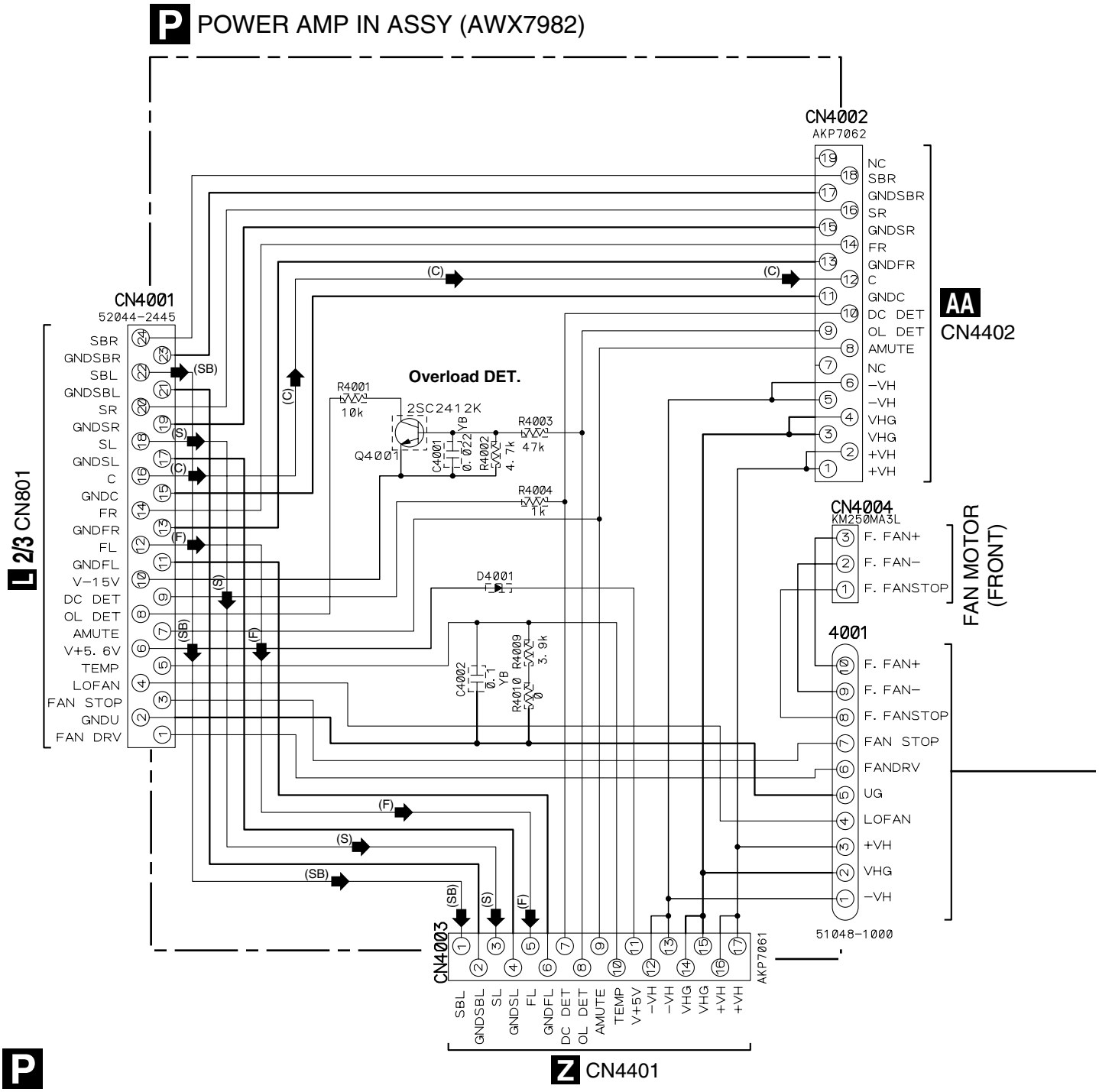
DSP CONNECTION ASSY (VSX-55TXi : AWX8299) (VSX-53TX : AWX8024)



: The power supply is shown with the marked box.

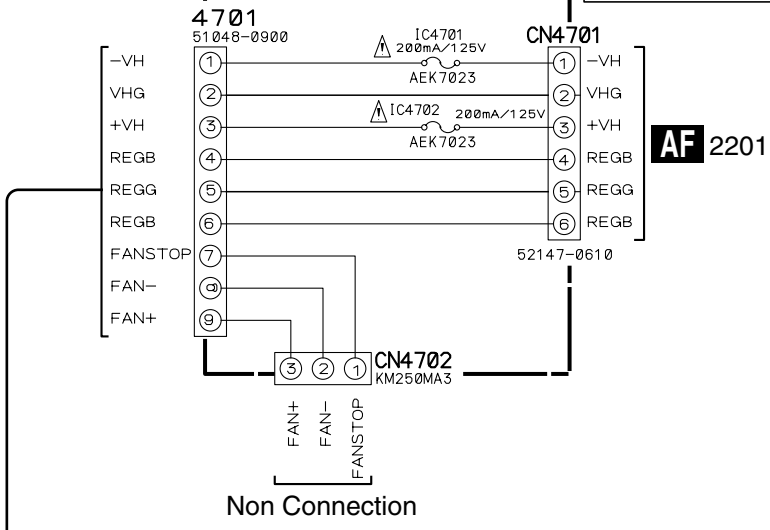
3.12 POWER AMP IN, FAN CONNECTION and FAN DRIVE ASSYS

(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)



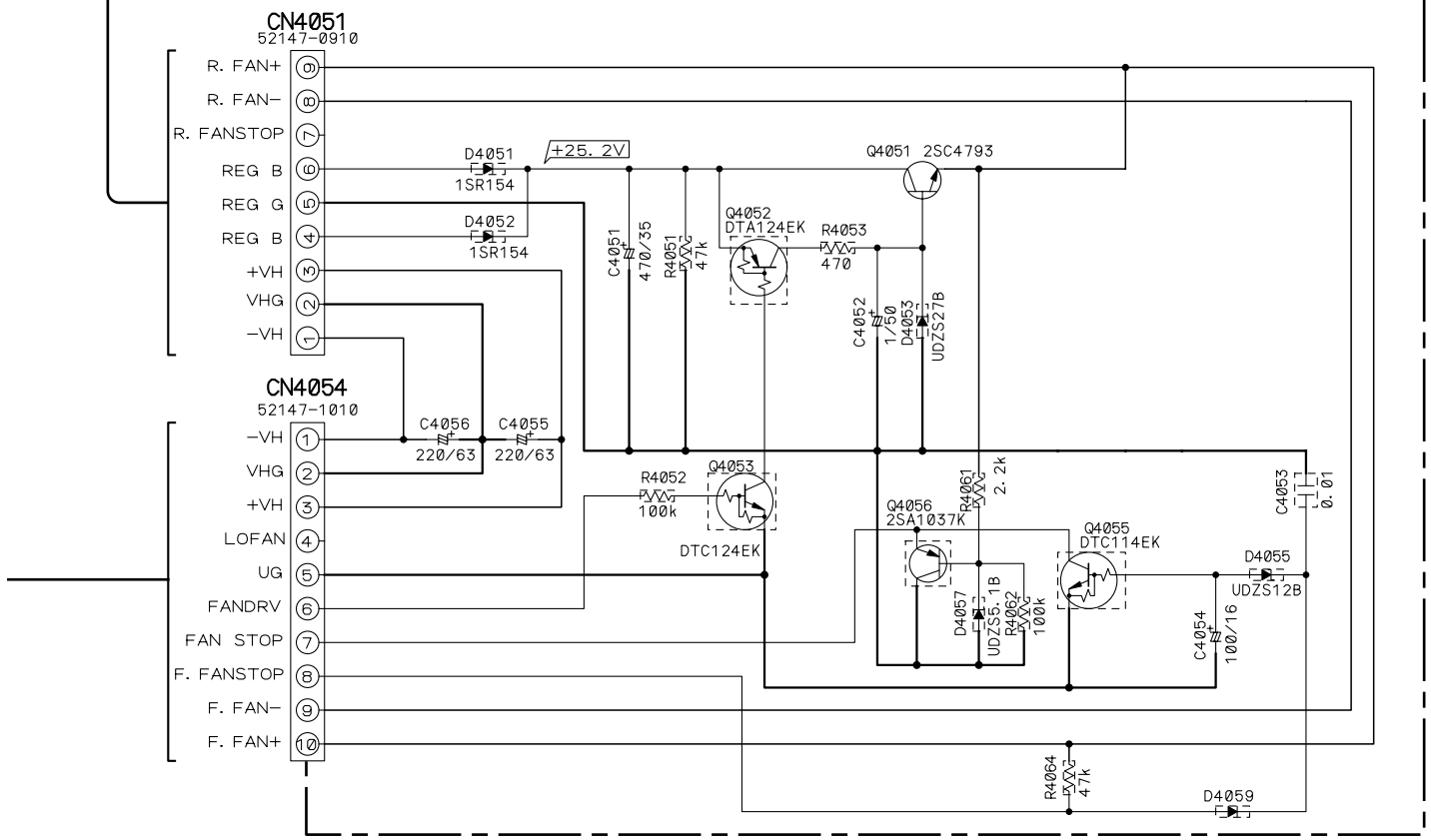
Q FAN CONNECTION ASSY (AWX8005)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.200 MFD, BY LITTELFUSE INK. FOR IC4701 AND IC4702.

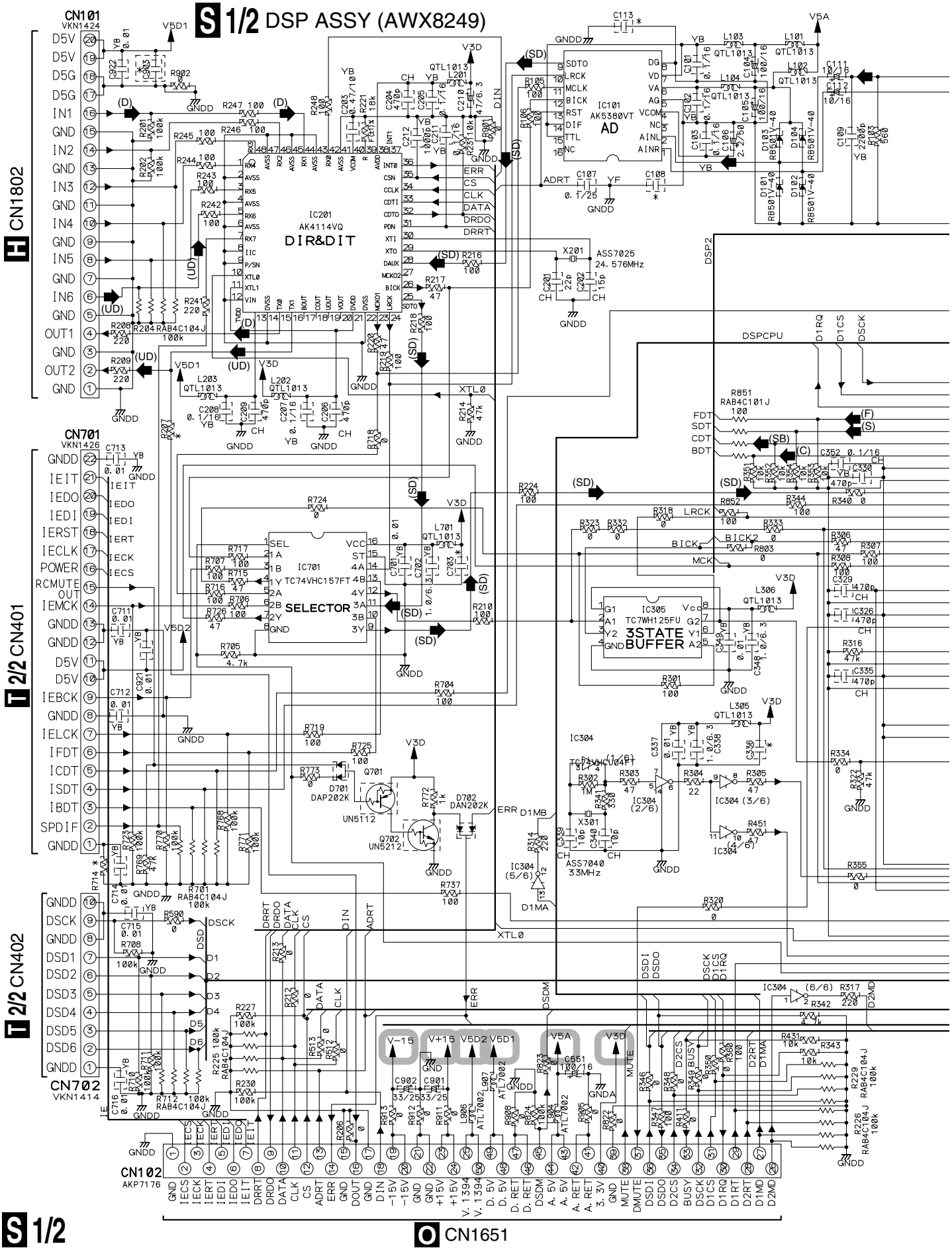


YA	CFTYA□□□J50–T
LA	CFTLA□□□J2A–T
CH	CCSRCH□□□J50–T
YB	CKSRYB□□□K50–T
YF	CKSRYF□□□Z25–T
	1SS355–TRB
	RS1/16S□□□J–T
RDR	RDR1/4VM□□□J–T
(MUF)	RD1/4MUF□□□J–T
3W	RS3LMF□□□J
F	NON–FRAMABLE

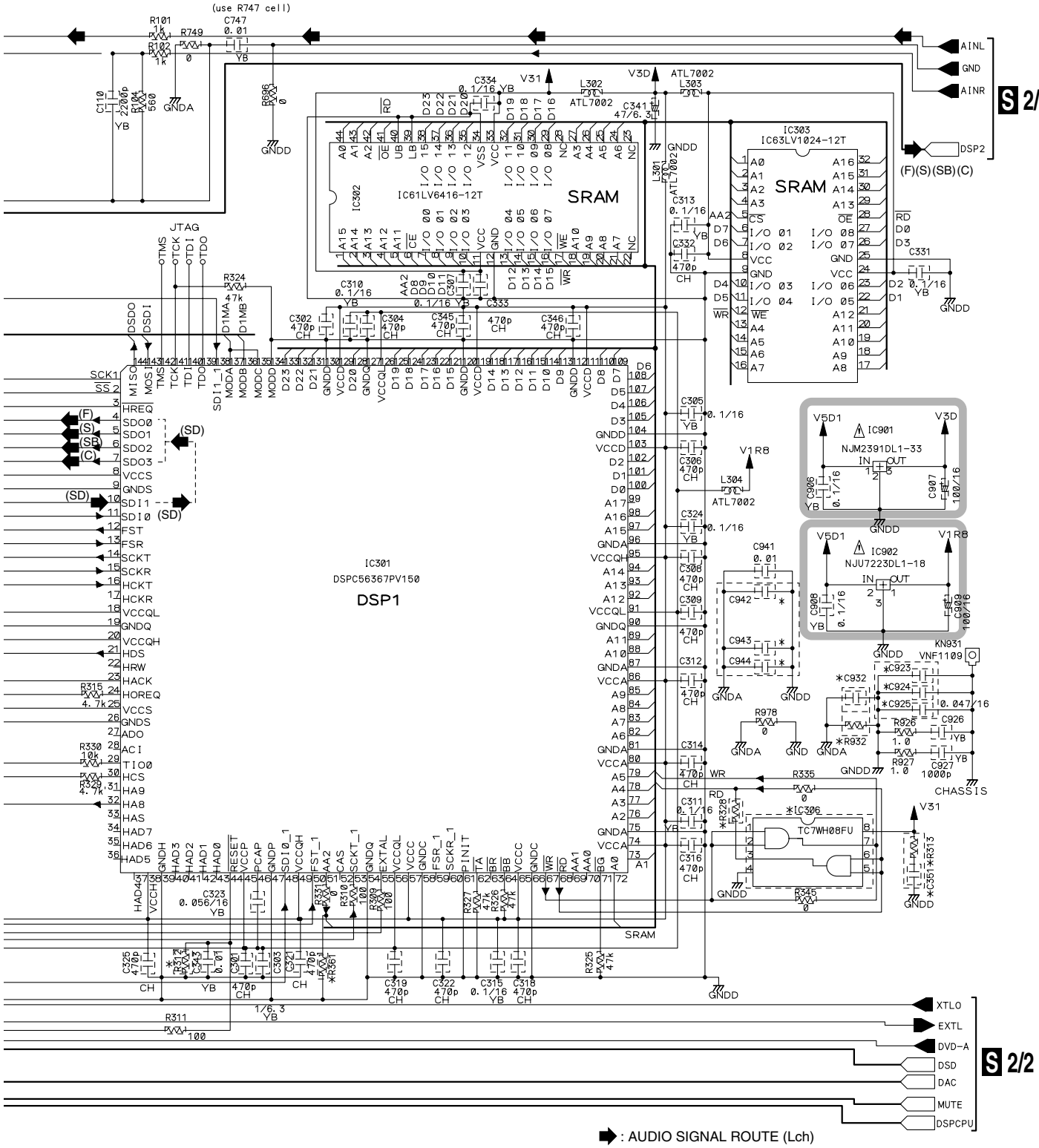
R FAN DRIVE ASSY (AWX7976)



3.13 DSP ASSY (1/2)



: The power supply is shown with the marked box.



: AUDIO SIGNAL ROUTE (Lch)

(F) : AUDIO SIGNAL ROUTE (FRONT Lch)

(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)

(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)

(C) : AUDIO SIGNAL ROUTE (CENTER ch)

(SD) : SURROUND DATA SIGNAL ROUTE

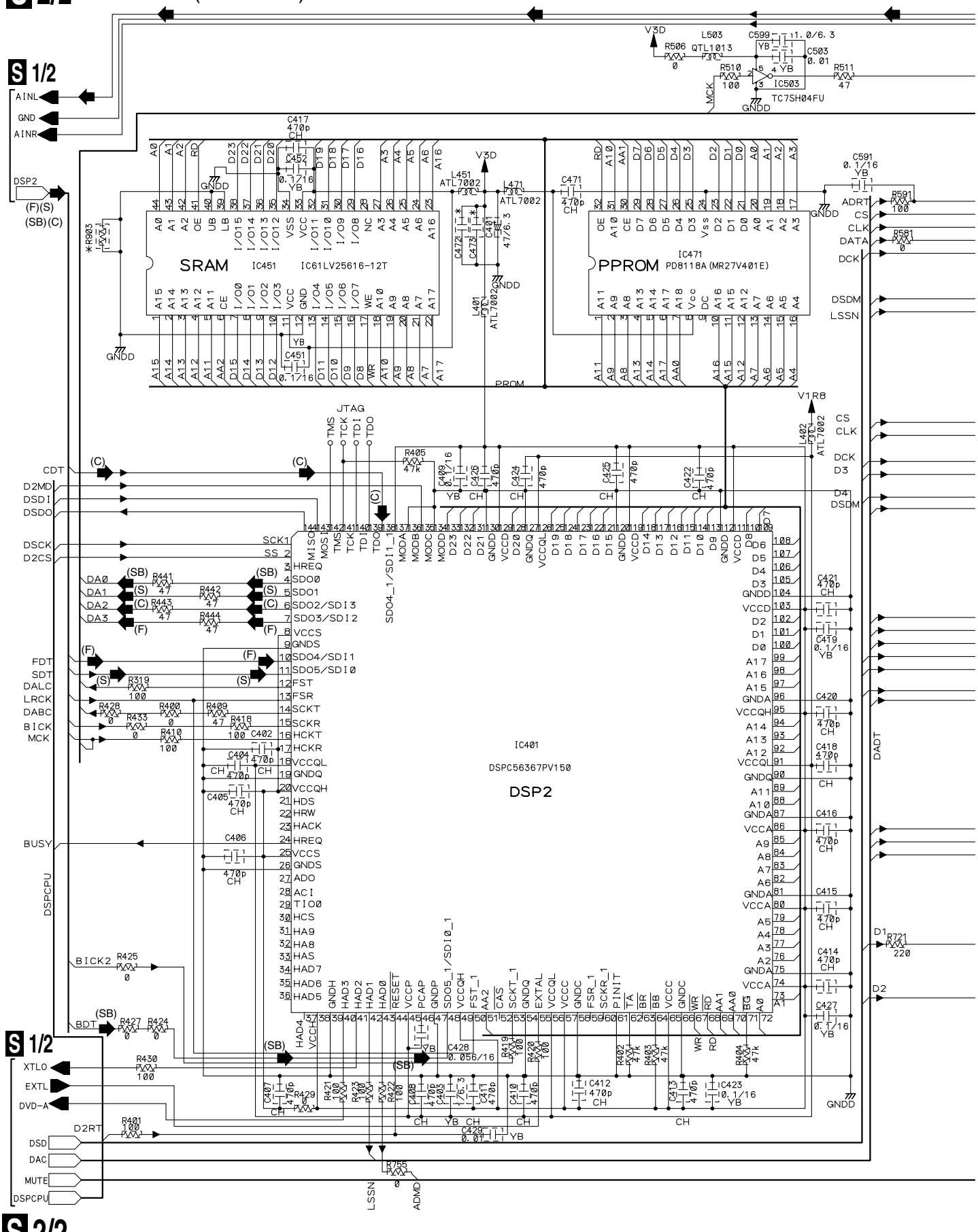
(D) : AUDIO SIGNAL ROUTE (DIGITAL)

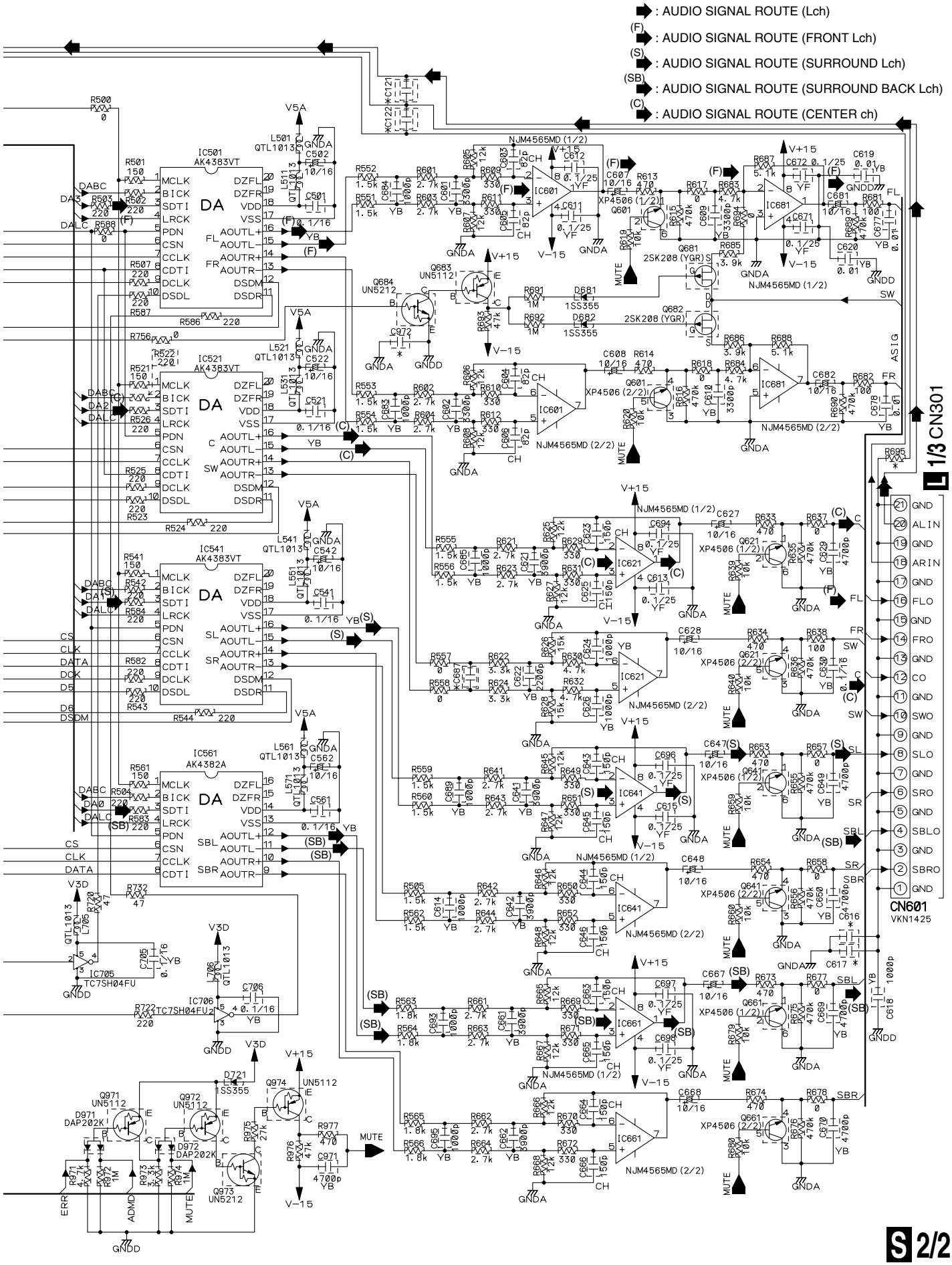
(UD) : AUDIO SIGNAL ROUTE (USB DIGITAL)

S 1/2

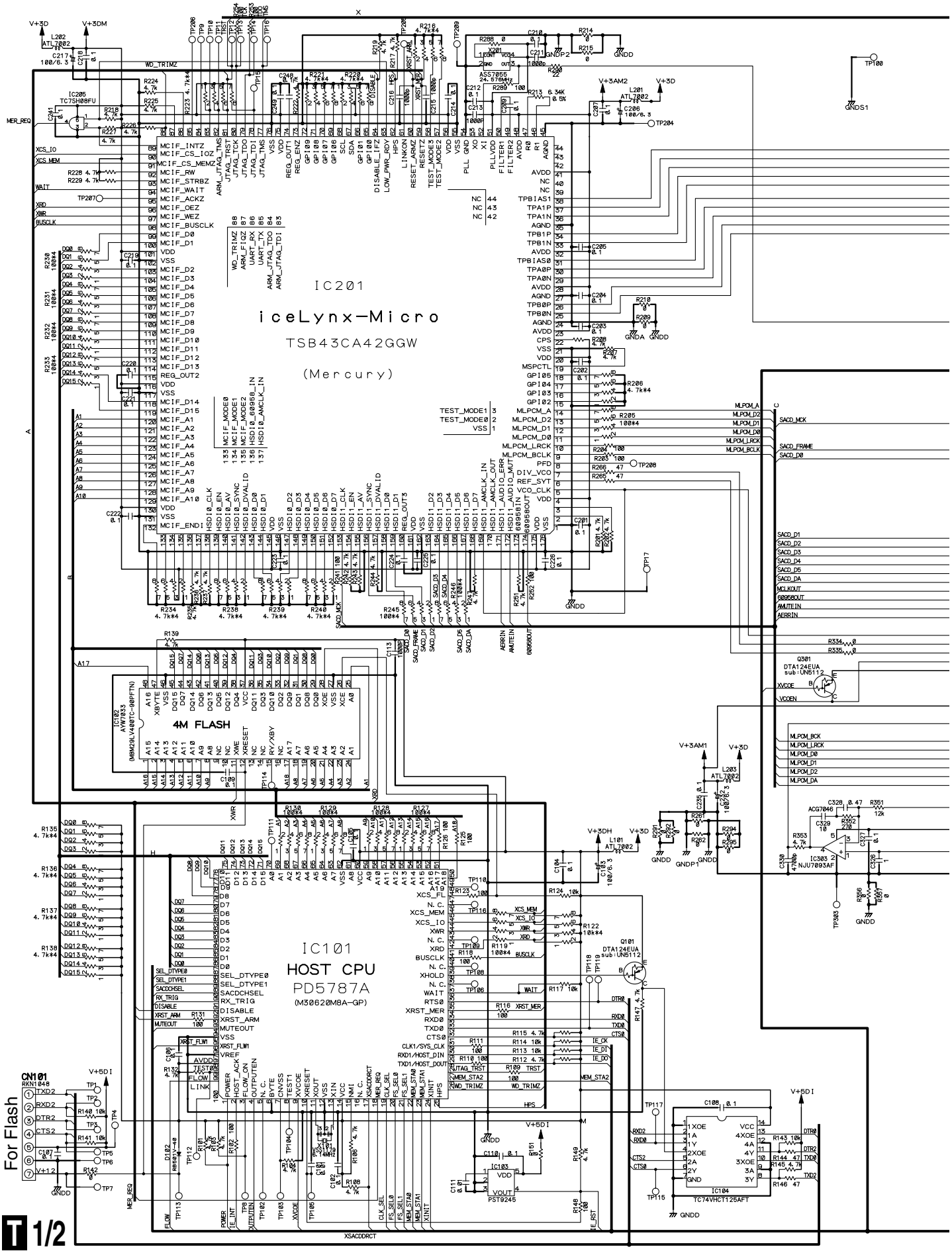
3.14 DSP ASSY (2/2)

S 2/2 DSP ASSY (AWX8249)




: AUDIO SIGNAL ROUTE (Lch)
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
L 1/3 CN301
S 2/2
CN601
VKN1425

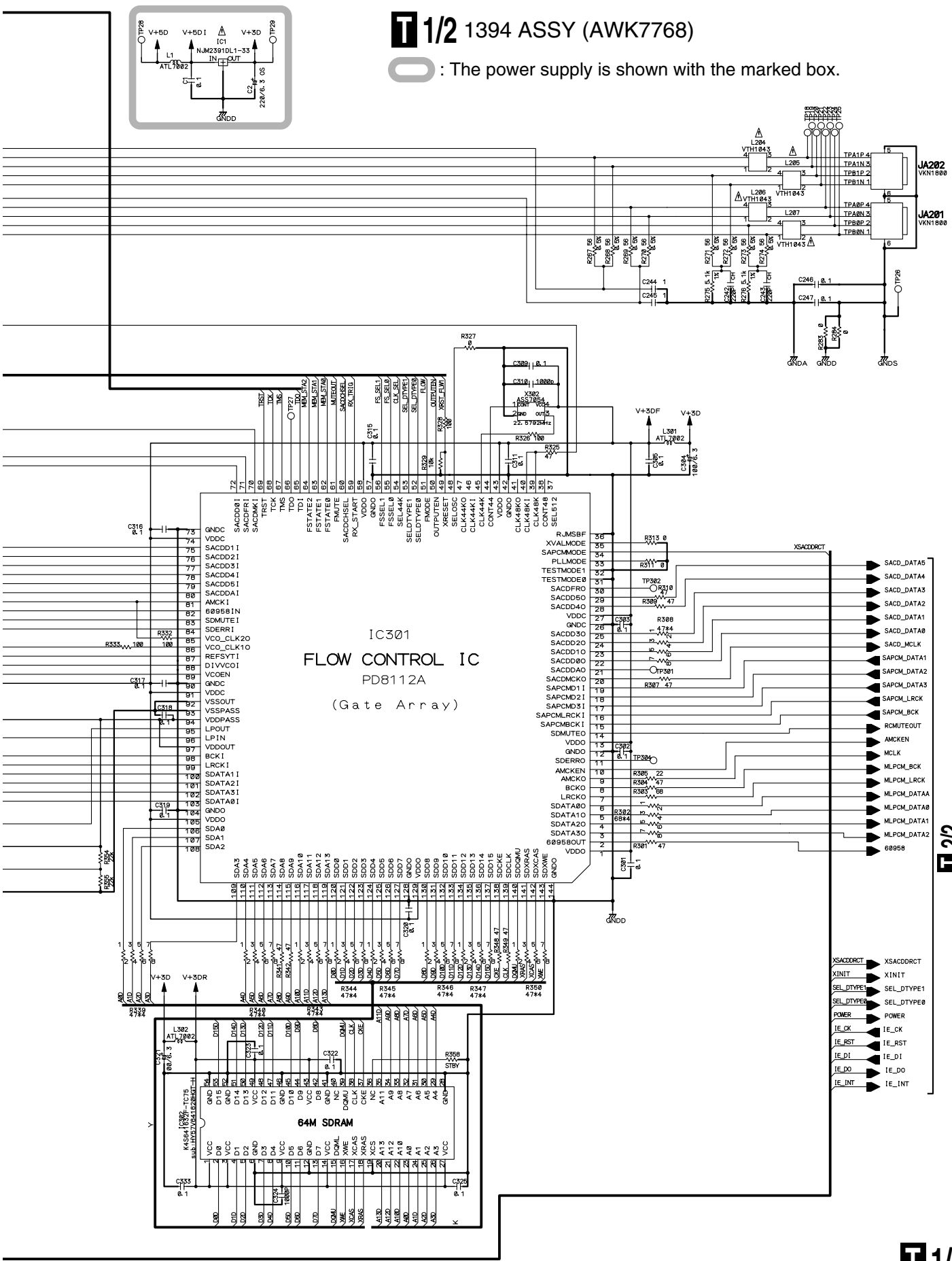
3.15 1394 ASSY (1/2) (VSX-55TXi ONLY)



T 1/2

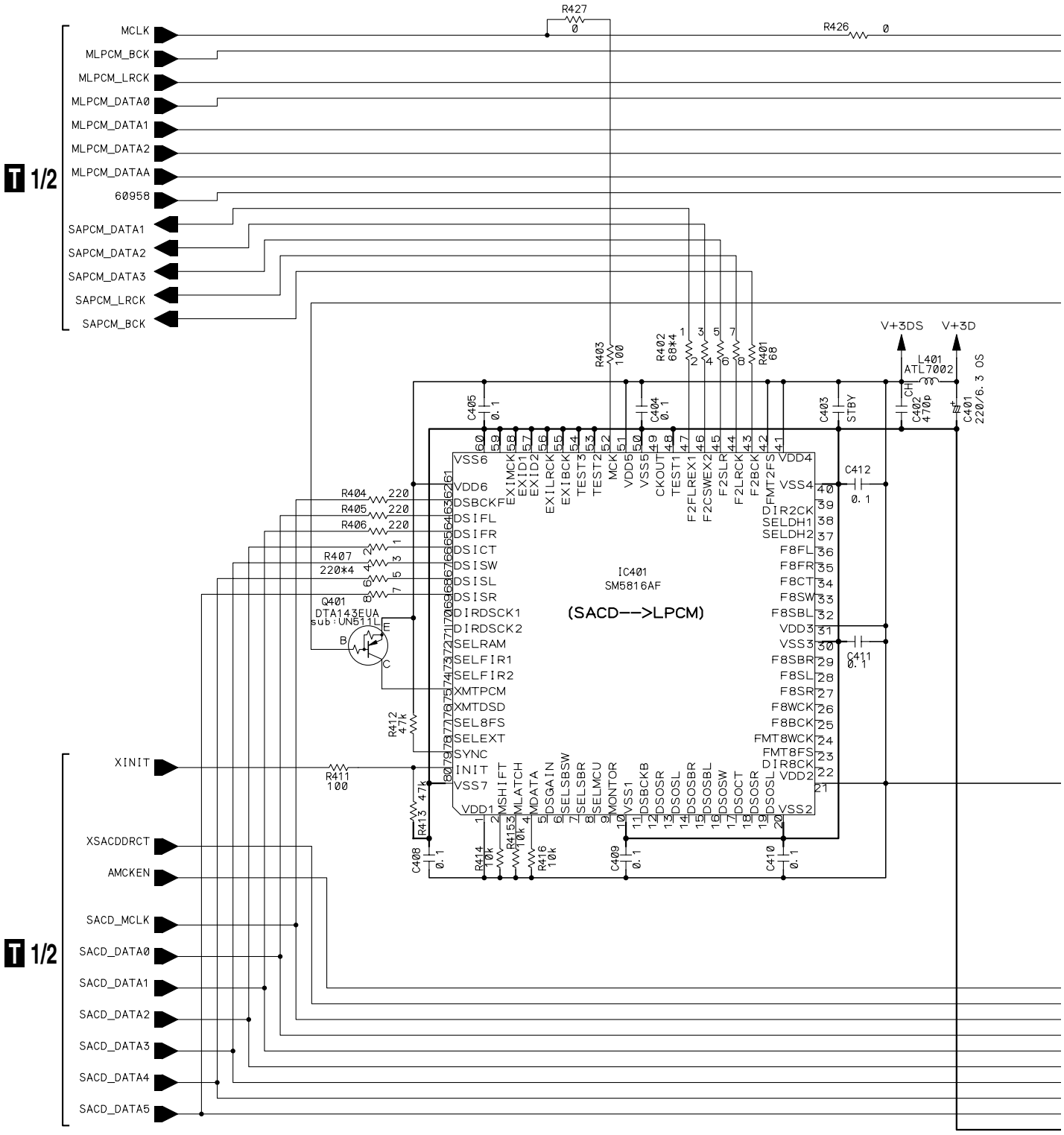
T 1/2 1394 ASSY (AWK7768)

: The power supply is shown with the marked box.

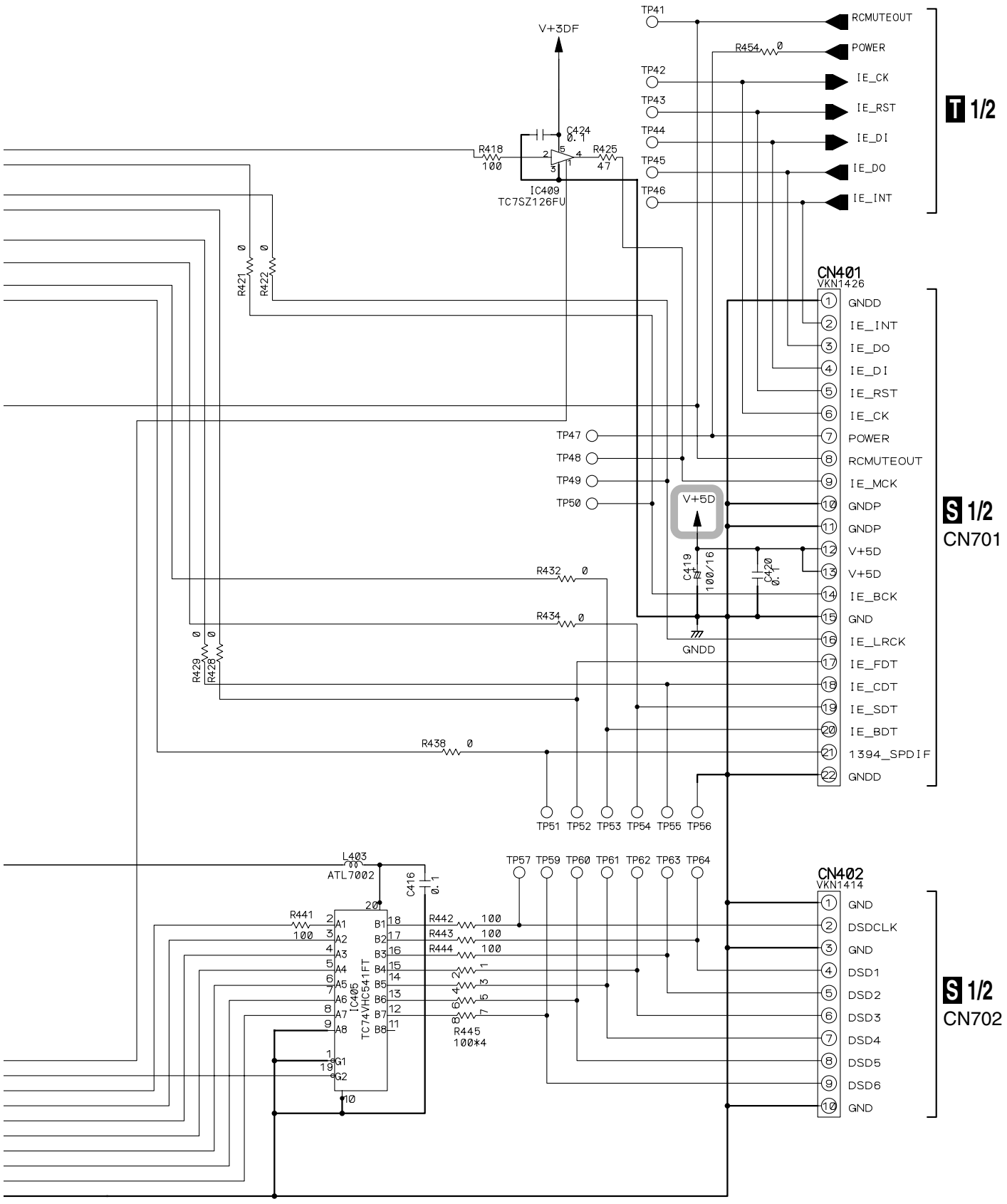


3.16 1394 ASSY (2/2) (VSX-55TXi ONLY)

T 2/2 1394 ASSY (AWK7768)



T 2/2



: The power supply is shown with the marked box.

T 2/2

3.17 DISPLAY ASSY

U DISPLAY ASSY
(VSX-55TXi : AWX8315)
(VSX-53TX : AWX7983)

55TXi
1-1 SB CH MODE
1-2 HI-BIT/ HI-SAMPLING
1-3 SIGNAL SELECT
1-4 MULTI JOG CONT. RETURN
1-5 MULTI JOG CONT. SETUP
1-6 SPEAKER
2-1 CLASS
2-2 BAND
2-3 TONE +
2-4 TONE -
2-5 BASS/ TREBLE
2-6 TONE ON/OFF
3-1 TUNING SELECT
3-2 (ST. FREQ) -
3-3 (ST. FREQ) +
3-4 TUNER EDIT
3-5 MR&S CONTROL
3-6 MR&S ON/OFF

53TX
2-1 LOUDNESS
2-2 MIDNIGHT
3-1 BAND
3-2 CLASS
3-3 TUNING SELECT
3-4 (ST. FREQ) -
3-5 (ST. FREQ) +
3-6 TUNER EDIT

KEY3 KEY2 KEY1
R3000 10K R3001 10K R3002 10K
C3000 1000p YB C3001 1000p YB C3002 1000p YB
S3000 ASG7013- S3001 ASG7013- S3002 ASG7013-
S3003 ASG7013- S3004 ASG7013- S3005 ASG7013-
S3006 ASG7013- S3007 ASG7013- S3008 ASG7013-
S3009 ASG7013- S3010 ASG7013- S3011 ASG7013-
S3012 ASG7013- S3013 ASG7013- S3014 ASG7013-
S3015 ASG7013- S3016 ASG7013- S3017 ASG7013-
(5.0 3.1 2.7 1.8 1.2 0.6 0.0)

F2 F2
AC2
CS
C3006 0.1/16 YB
NC NC NC NC CS NC
60 79 78 77 76 75

KEY5
KEY4
HP_SW

1 KEY5
2 MR SW (P/X)
3 KEY1
4 KEY2
5 KEY3
6 KEY4
7 1W W. UP
8 H. P. SW
9 SR IN
10 xRESET
11 NC
12 NC
13 GND
14 Xin
15 Xout
16 Vdd
17 CHECKER
18 NC
19 NC
20 NC
21 MIC SW
22 232C DET
23 MR IN
24 NC
25 NC
26 NC
27 VEE
28 NC
29 NC
30 NC

X3000 ASS7042- 4.19MHz
R3026 220
C3007 100p CH
R3028 1M
R3029 10K
C3032 0.1/16 YB
C3008 100/6.3 JQ
R3030 47k
C3009 0.1/16 YB
R3069 100k
R3027 220
C3036 0.01 YB
C3035 100/6.3 JQ

IC3001 TC7W53FU
C3010 150000pF B
Q3000 FMA1A (SMT5)
Q3001 DTC124EK
R3031 10K
R3032 3.9K
R3034 10K
R3033 22K
D3002 D3003 D3004

D3005 D3006
R3036 1K
R3037 10K
C3037 0.01 YB
C3011 0.01 YB
R3038 100K
C3012 100/6.3 JQ
Vdd GND Vout
RPM7140-H4 IC3002
Q3002 DTC124EK
Q3003 2SA1037K
D3007 R3035 4.7K
R3040 100
R3039 100K
D3008

L3000 ATL7002
D3009 DAN202K-TLB

CS DI DO CLK DRDY AC_RY VF AC1 AC2

Remote Signal Control

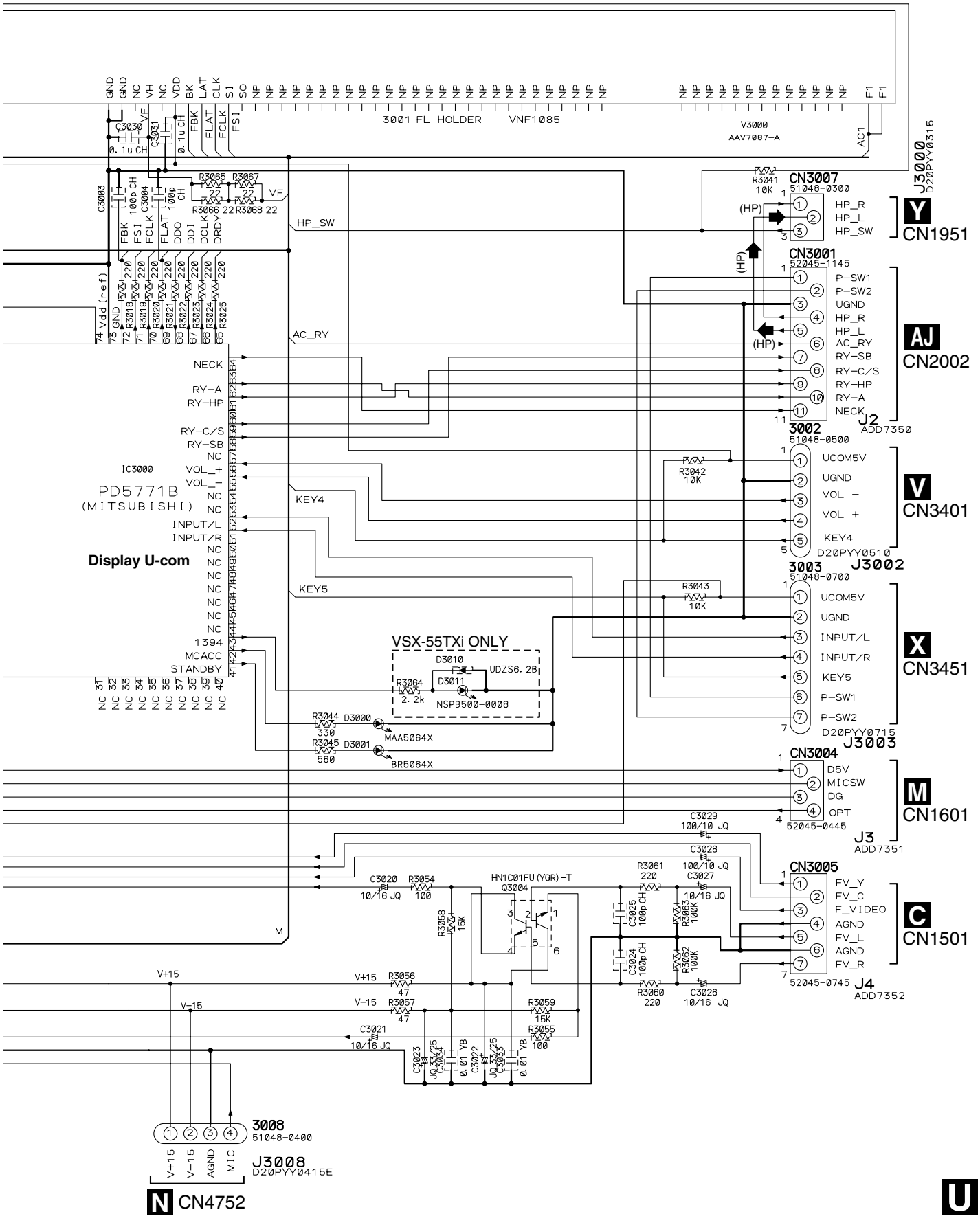
* D3002~D3008:1SS355

CN3006
52045-3245
J1
ADD7349

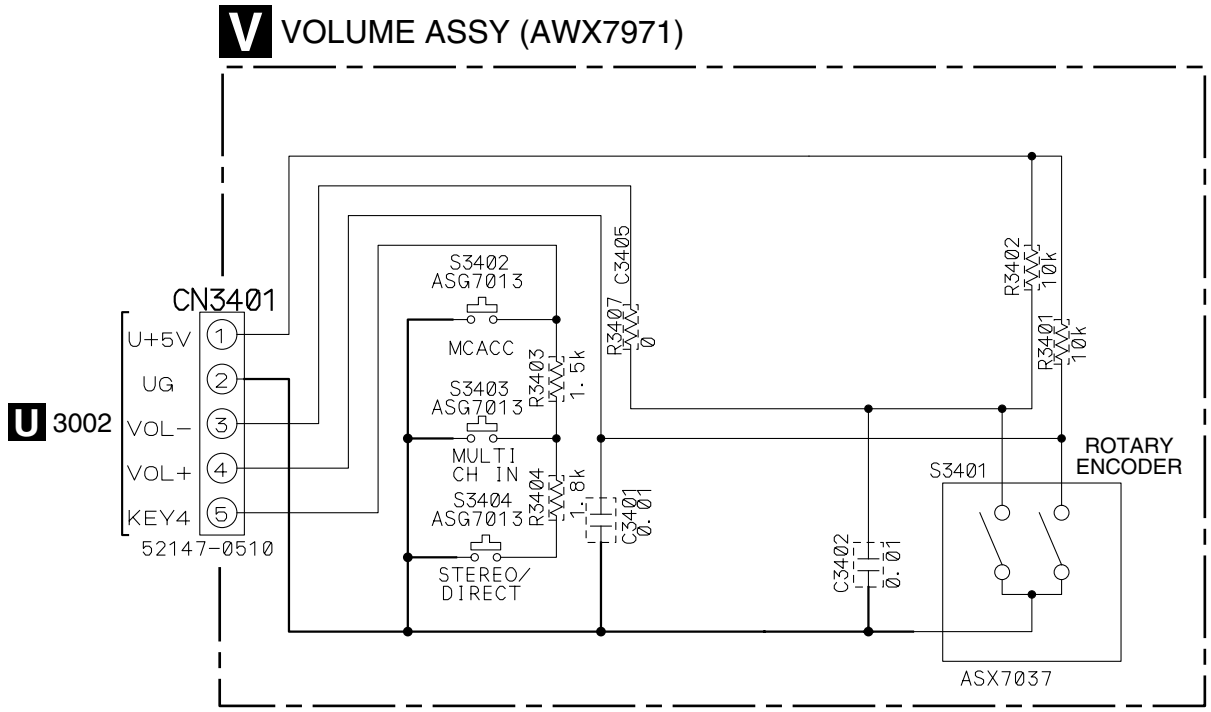
SR IN RMC SR OUT V+15 V-15 FV_Lch GNDA FV_Rch ST+5.6V MIC U+5.6V F VIDEO FV_Y FV_C 232C DET DG OPT D5V DISP_CS DISP_DI DISP_DO DISP_CK DISP_RDY DISP_RST 1W W. UP AC RY MR IN UGND UGND VF FL AC1 FL AC2

L 3/3 CN501

(HP) : AUDIO SIGNAL ROUTE (PHONES ch)

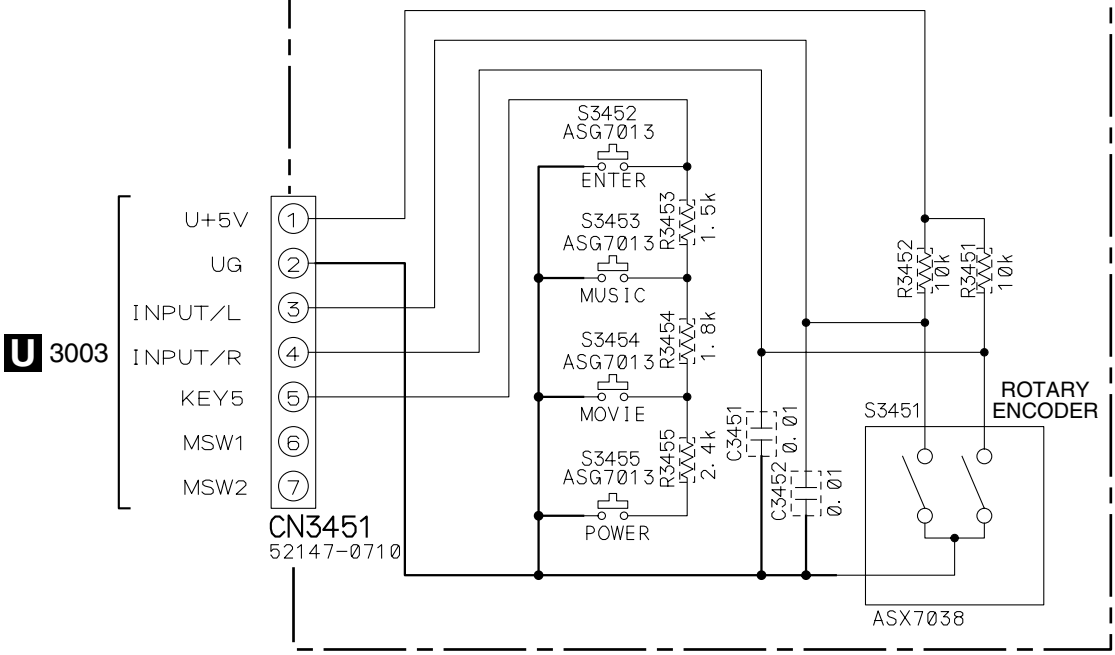


3.18 VOLUME, MULTI JOG and HEADPHONE ASSYS



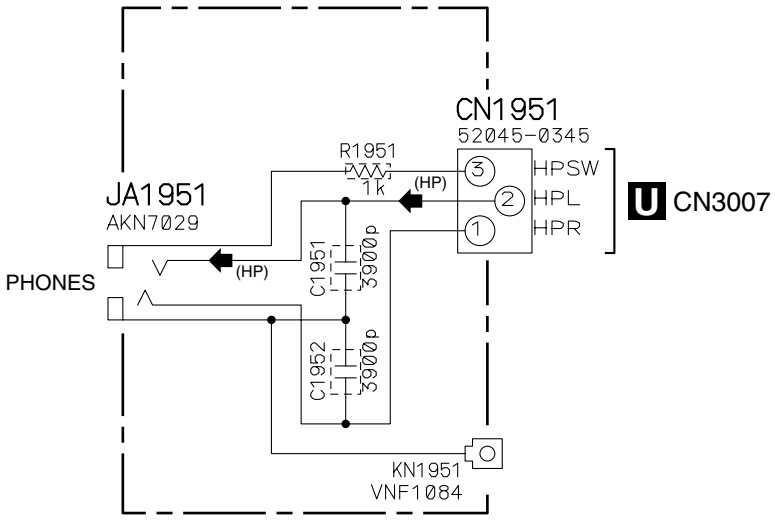
S3401 : MASTER VOLUME
S3402 : ACOUSTIC EQ
S3403 : MULTI CH IN
S3404 : STEREO/DIRECT

X MULTI JOG ASSY (AWX7972)



S3451 : MULTI JOG
S3452 : ENTER
S3453 : MUSIC
S3454 : MOVIE
S3455 : ⏻ STANDBY/ON

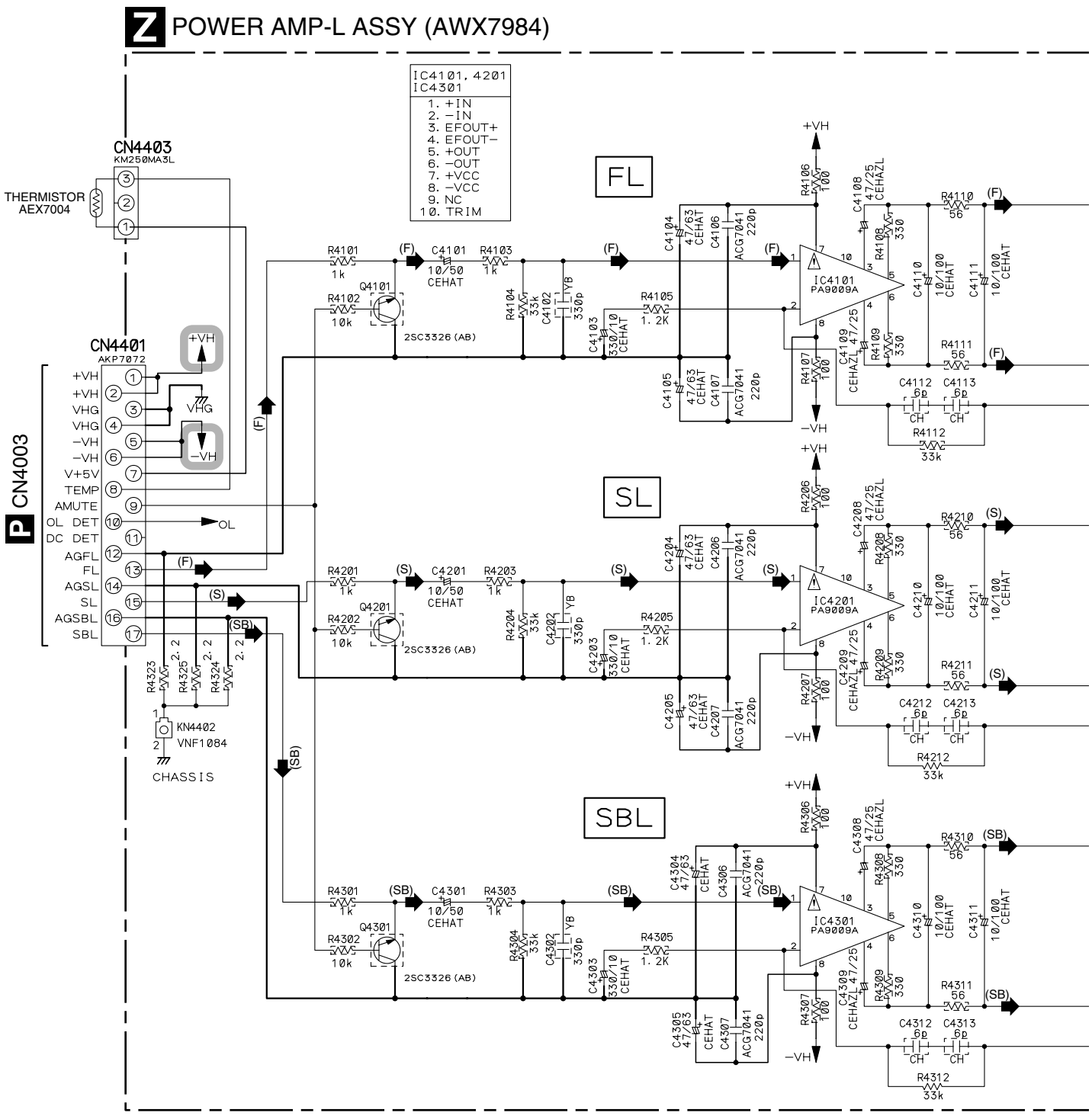
Y HEADPHONE ASSY (AWX7980)



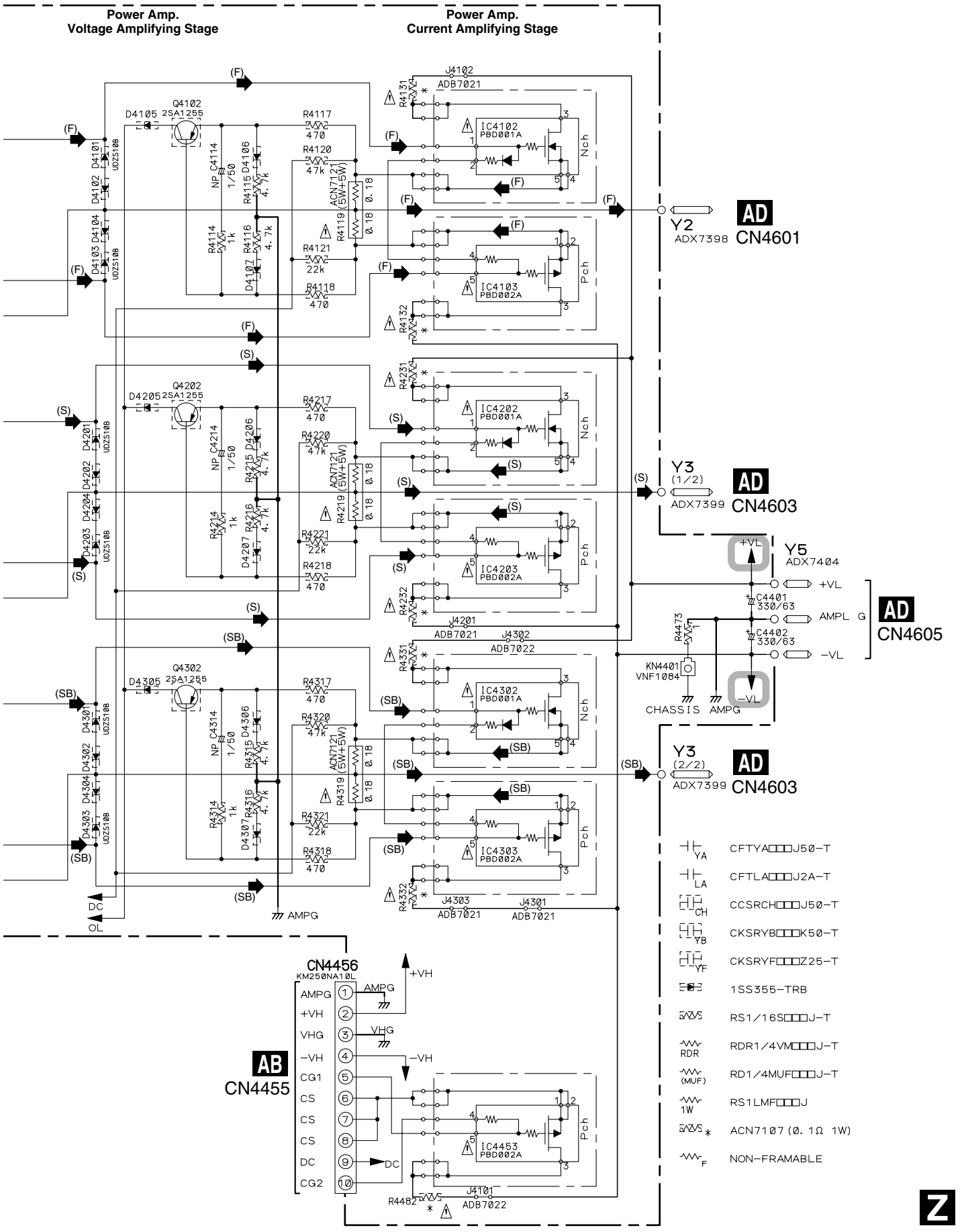
(HP) ➡ : AUDIO SIGNAL ROUTE (PHONES ch)

X Y

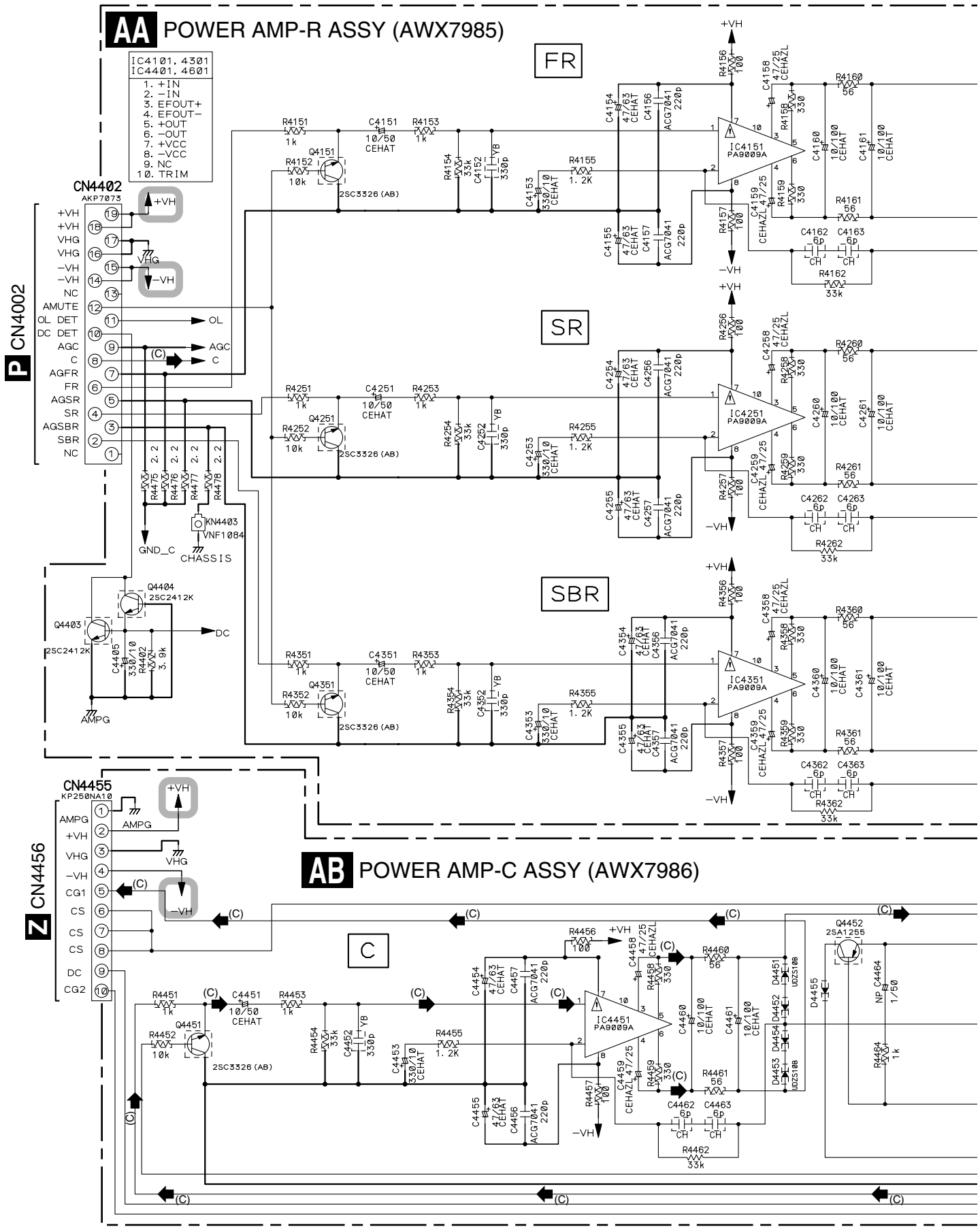
3.19 POWER AMP-L ASSY



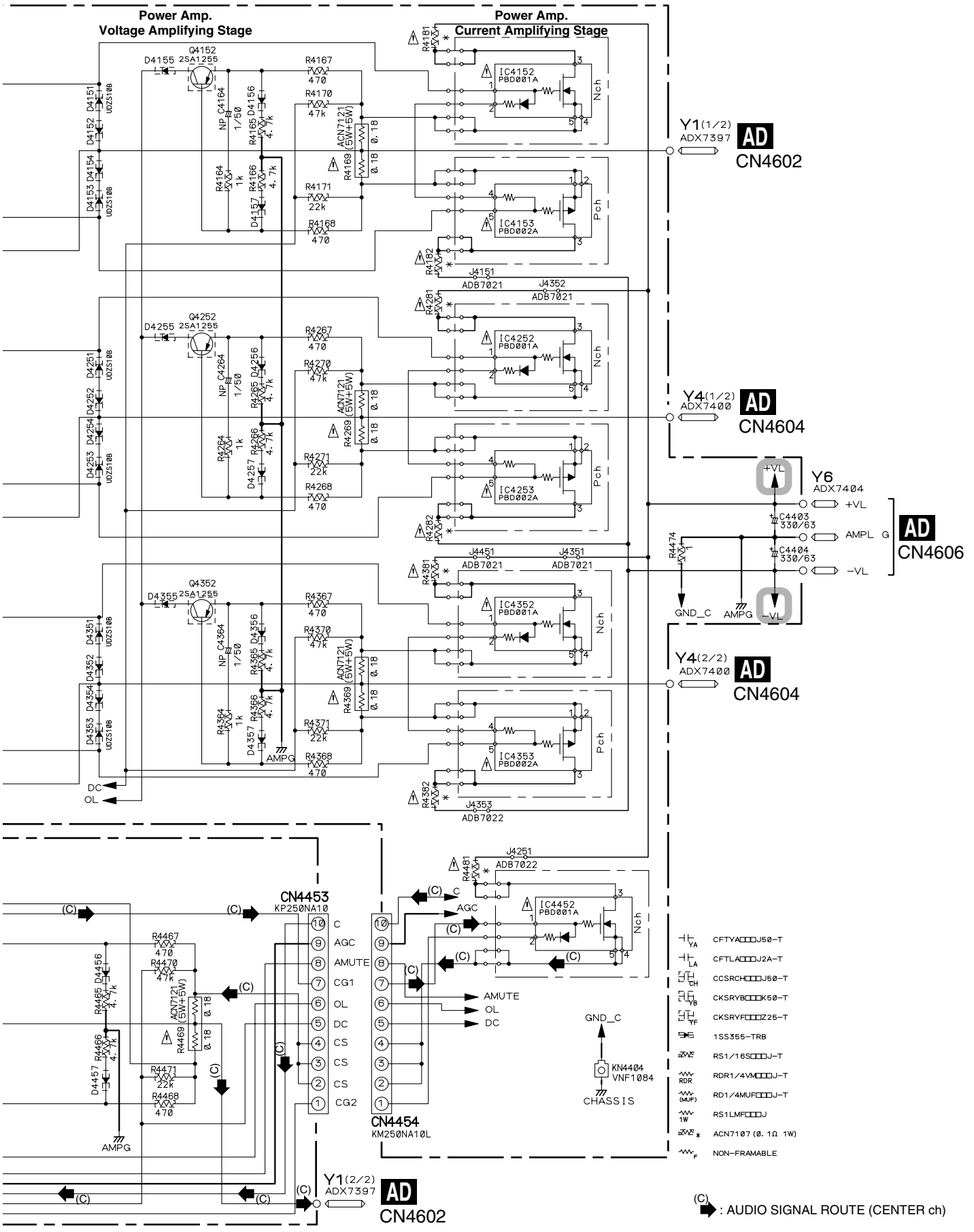
: The power supply is shown with the marked box.



3.20 POWER AMP-R and POWER AMP-C ASSYS



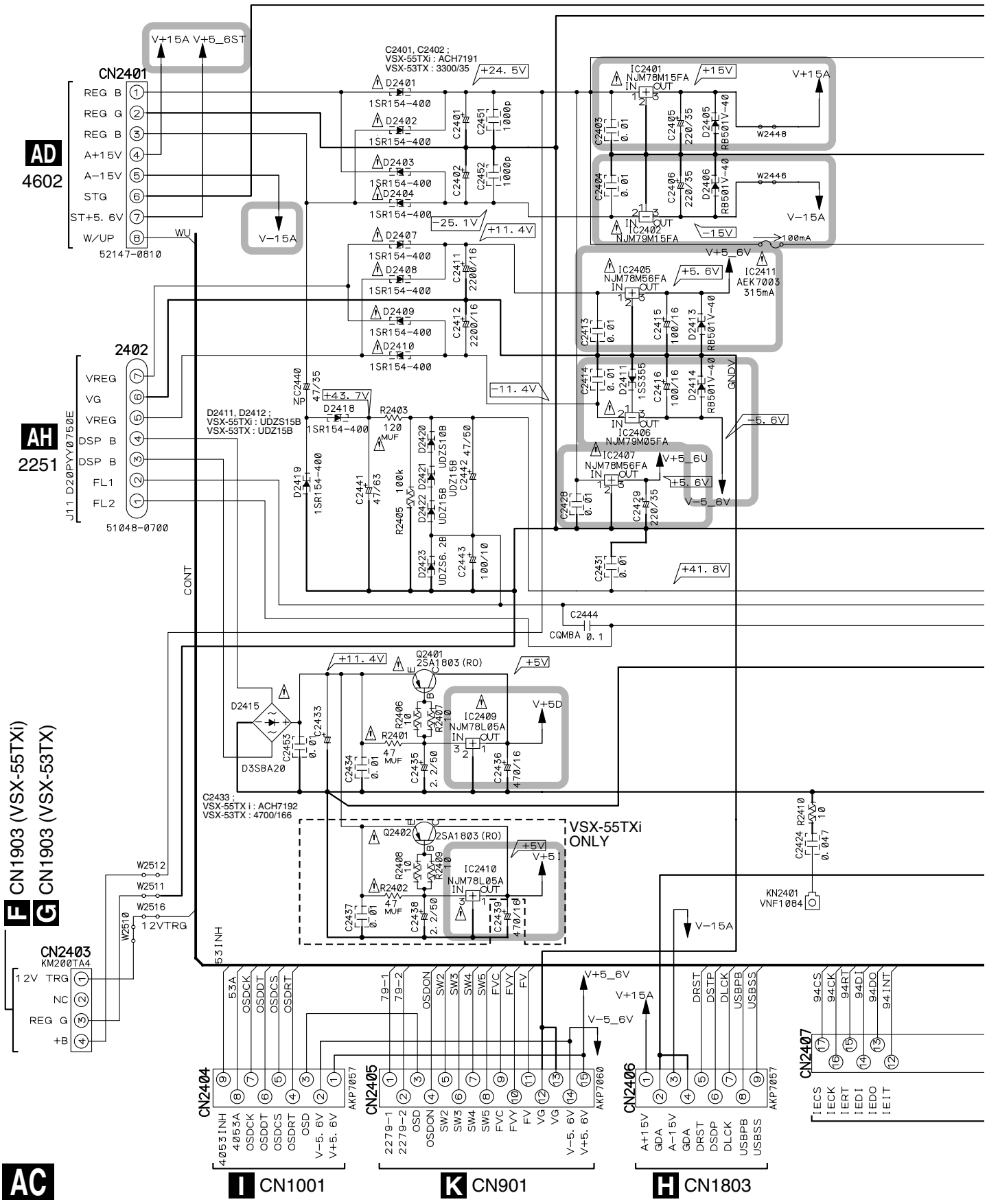
AA AB

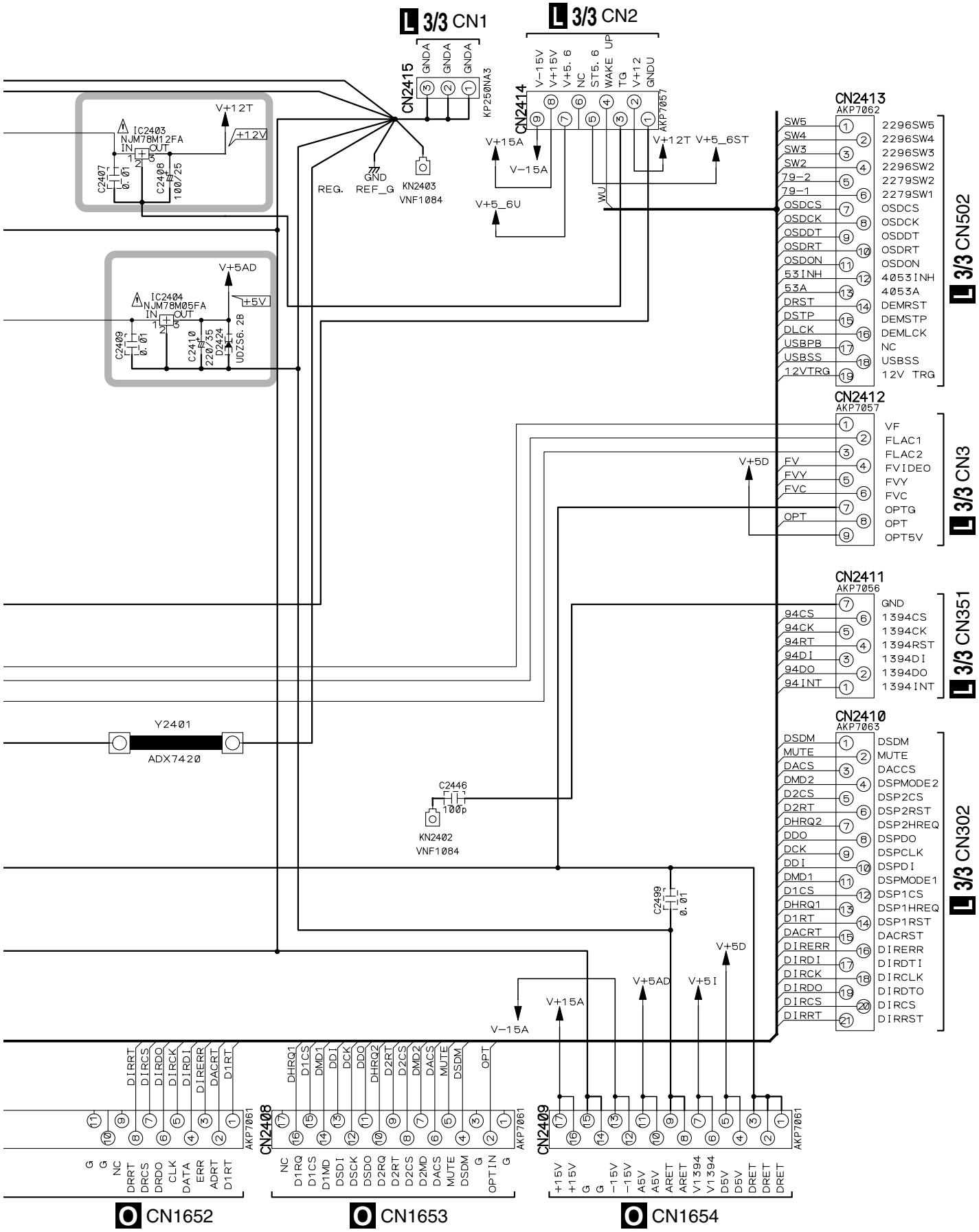

Power Amp.
Voltage Amplifying Stage
Power Amp.
Current Amplifying Stage
Q4152
2SA1255
D4155
IC4152
PBD001A
IC4153
PBD002A
Y1(1/2)
ADX7397
CN4602
Q4252
2SA1255
D4255
IC4252
PBD001A
IC4253
PBD002A
Y4(1/2)
ADX7400
CN4604
Y6
ADX7404
+VL
AMPL
-VL
C4403
330/63
C4404
330/63
CN4606
Q4352
2SA1255
D4355
IC4352
PBD001A
IC4353
PBD002A
Y4(2/2)
ADX7400
CN4604
GND_C
AMPG
DC
OL
J4151
ADB7021
J4352
ADB7021
J4451
ADB7021
J4351
ADB7021
J4353
ADB7022
J4251
ADB7022
CN4453
KP250NA10
CN4454
KM250NA10L
IC4452
PBD001A
AGC
AMUTE
OL
DC
CG1
CG2
CS
KN4404
VNF1084
CHASSIS
Y1(2/2)
ADX7397
CN4602
CFTYA□□□J50-T
CFTLA□□□J2A-T
CCSRCH□□□J50-T
CKSRYB□□□K50-T
CKSRYF□□□Z25-T
1SS355-TRB
RS1/16S□□□J-T
RDR1/4VM□□□J-T
RD1/4MUF□□□J-T
RS1LMF□□□J
ACN7107 (0.1Ω 1W)
NON-FRAMABLE
: AUDIO SIGNAL ROUTE (CENTER ch)
: The power supply is shown with the marked box.
AA
AB

3.21 REGULATOR ASSY

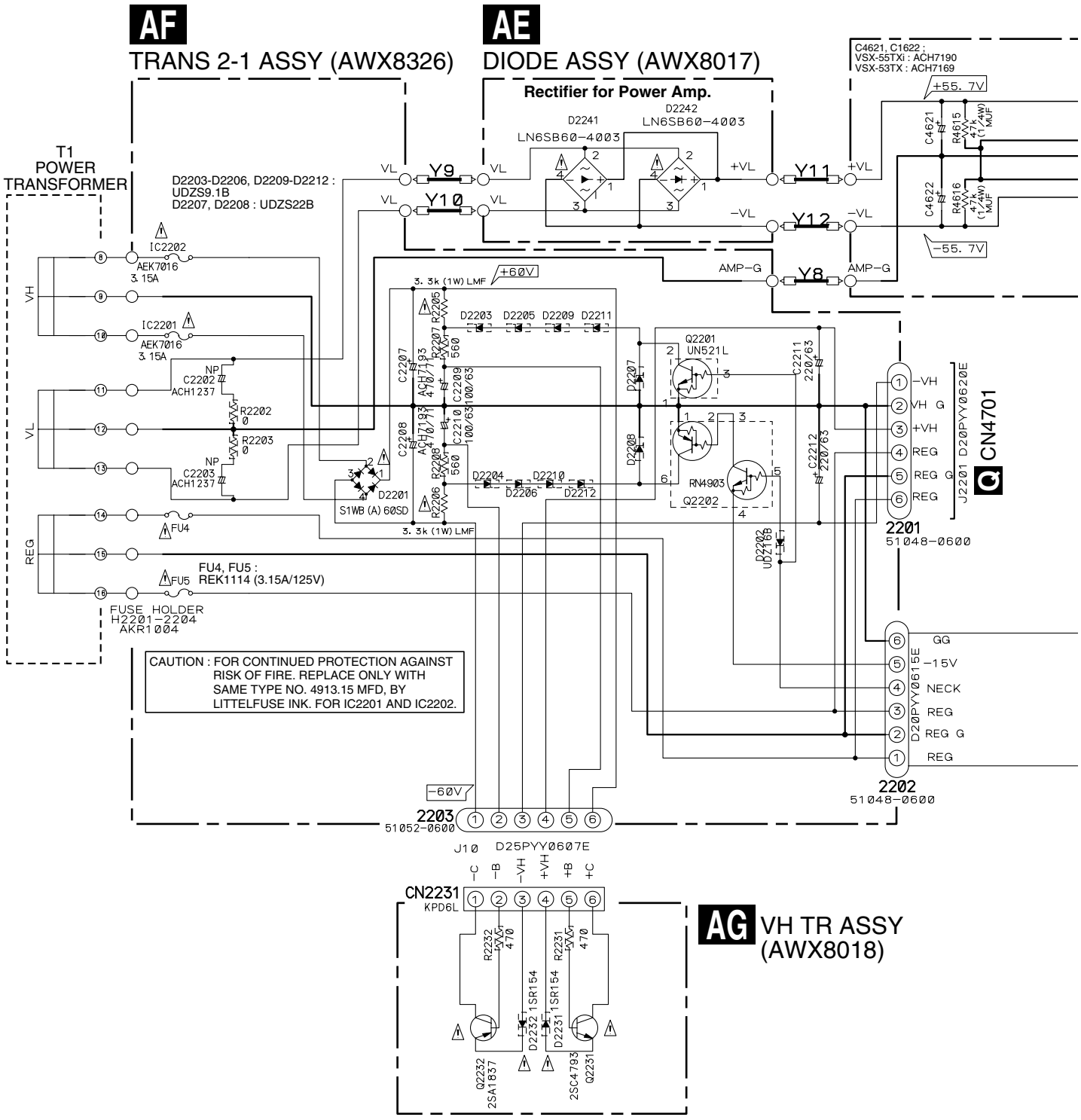
AC REGULATOR ASSY (VSX-55TXi : AWX8303)
(VSX-53TX : AWX7967)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.315 MFD, BY LITTELFUSE INK. FOR IC2411.




L 3/3 CN1
L 3/3 CN2
CN2415
KP250NA3
GNDA
GNDA
GNDA
CN2414
AKP7057
V-15V
V+15V
V+5. 6
NC
ST5. 6
WAKE UP
TG
V+12
GNDU
IC2403
NJM78M12FA
IN
OUT
V+12T
+12V
C2407
0. 01
C2408
100/25
REG.
GND
REF_G
KN2403
VNF1084
V+15A
V-15A
V+5_6U
V+12T V+5_6ST
WU
IC2404
NJM78M05FA
V+5AD
+5V
C2409
0. 01
C2410
220/35
D2424
UDZS6. 2B
CN2413
AKP7062
SW5
SW4
SW3
SW2
79-2
79-1
OSDCS
OSDCK
OSDDT
OSDRT
OSDON
53INH
53A
DRST
DSTP
DLCK
USBPB
USBSS
12VTRG
2296SW5
2296SW4
2296SW3
2296SW2
2279SW2
2279SW1
OSDCS
OSDCK
OSDDT
OSDRT
OSDON
4053INH
4053A
DEMRST
DEMSTP
DEMLCK
NC
USBSS
12V TRG
L 3/3 CN502
CN2412
AKP7057
VF
FLAC1
FLAC2
FVIDEO
FVY
FVC
OPTG
OPT
OPT5V
V+5D
FV
FVY
FVC
OPT
L 3/3 CN3
CN2411
AKP7056
GND
94CS
94CK
94RT
94DI
94DO
94INT
1394CS
1394CK
1394RST
1394DI
1394DO
1394INT
L 3/3 CN351
Y2401
ADX7420
CN2410
AKP7063
DSDM
MUTE
DACS
DMD2
D2CS
D2RT
DHRQ2
DDO
DCK
DDI
DMD1
D1CS
DHRQ1
D1RT
DACRT
DIRERR
DIRDI
DIRCK
DIRDO
DIRCS
DIRRT
DSPMODE2
DSP2CS
DSP2RST
DSP2HREQ
DSPDO
DSPCLK
DSPDI
DSPMODE1
DSP1CS
DSP1HREQ
DSP1RST
DACRST
DIRERR
DIRDTI
DIRCLK
DIRDTO
DIRCS
DIRRST
L 3/3 CN302
C2446
100p
KN2402
VNF1084
C2499
0. 01
V+5D
V+5AD
V+5I
V+15A
V-15A
CN2408
CN2409
AKP7061
G
G
NC
DRRT
DRCS
DRDO
CLK
DATA
ERR
ADRT
D1RT
NC
D1RQ
D1CS
D1MD
DSDI
DSCK
DSDO
D2RQ
D2RT
D2CS
D2MD
DACS
MUTE
DSDM
G
OPTIN
G
+15V
+15V
G
G
-15V
-15V
A5V
A5V
ARET
ARET
V1394
V1394
D5V
D5V
DRET
DRET
DRET
O CN1652
O CN1653
O CN1654
: The power supply is shown with the marked box.
AC

3.22 SP/PS, DIODE, TRANS 2-1 and VH TR ASSYS



AG VH TR ASSY (AWX8018)

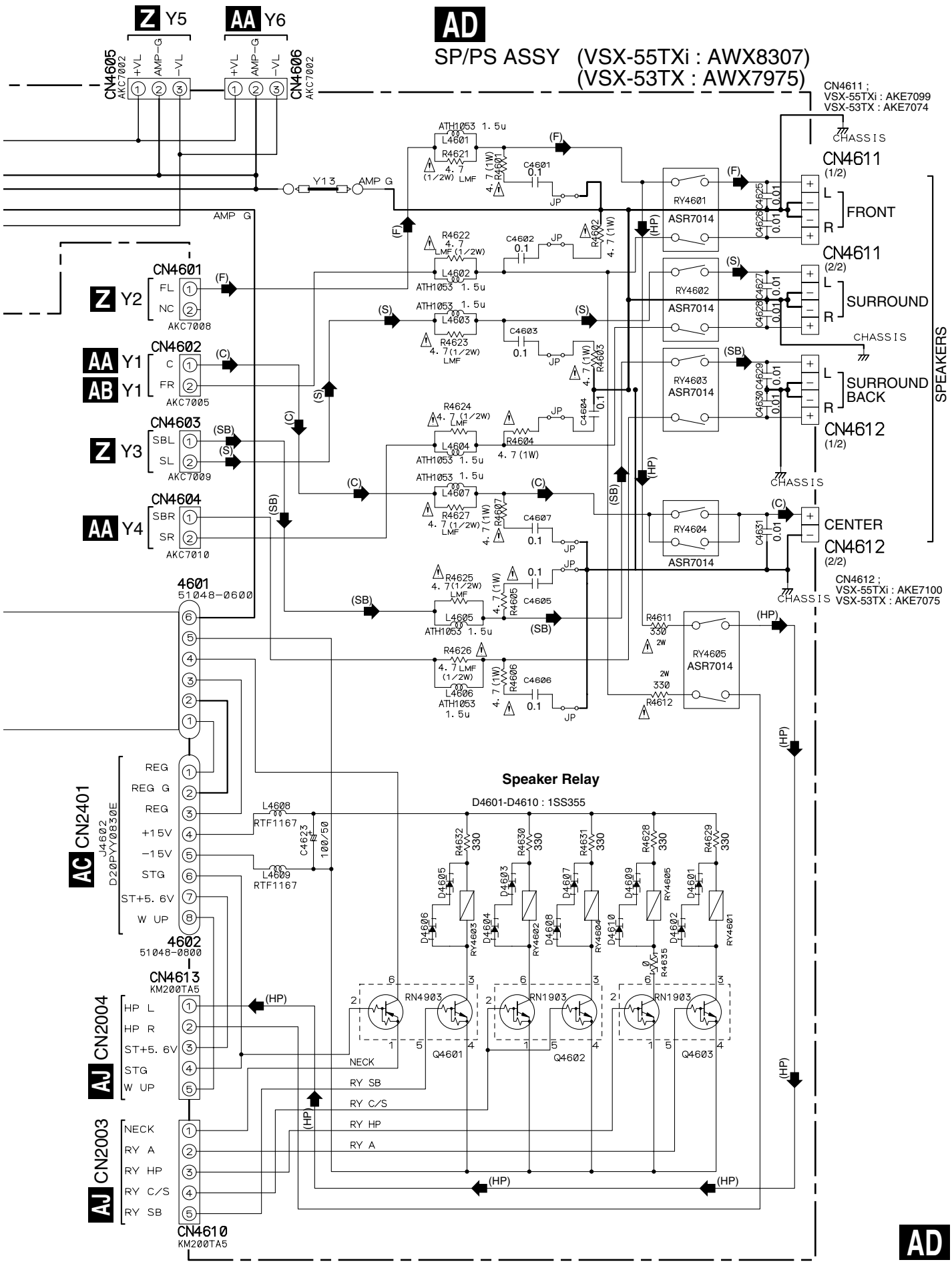
• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

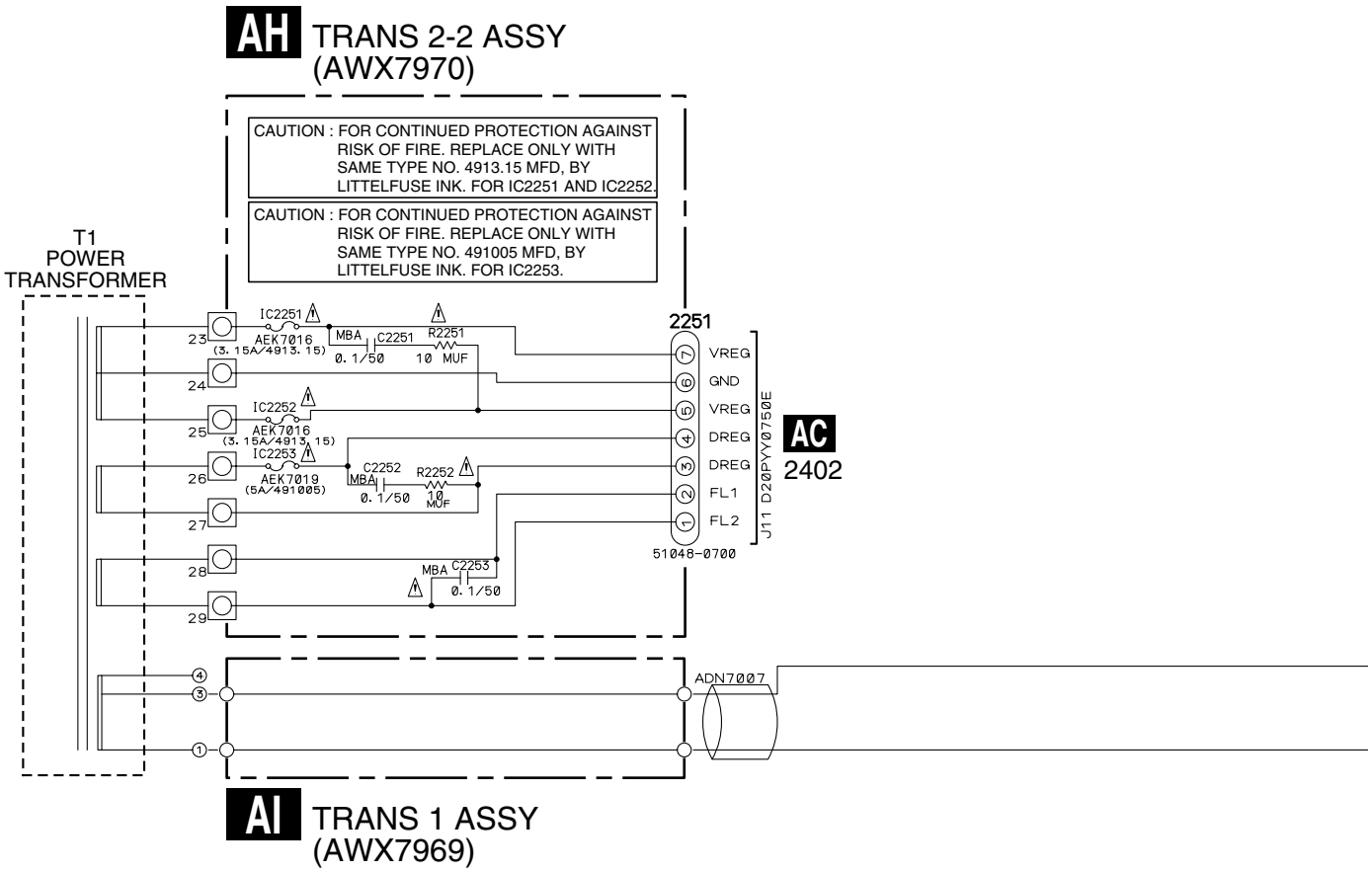
(F) : AUDIO SIGNAL ROUTE (FRONT Lch)
(S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
(SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
(C) : AUDIO SIGNAL ROUTE (CENTER ch)
(HP) : AUDIO SIGNAL ROUTE (PHONES ch)

AD AE AF AG

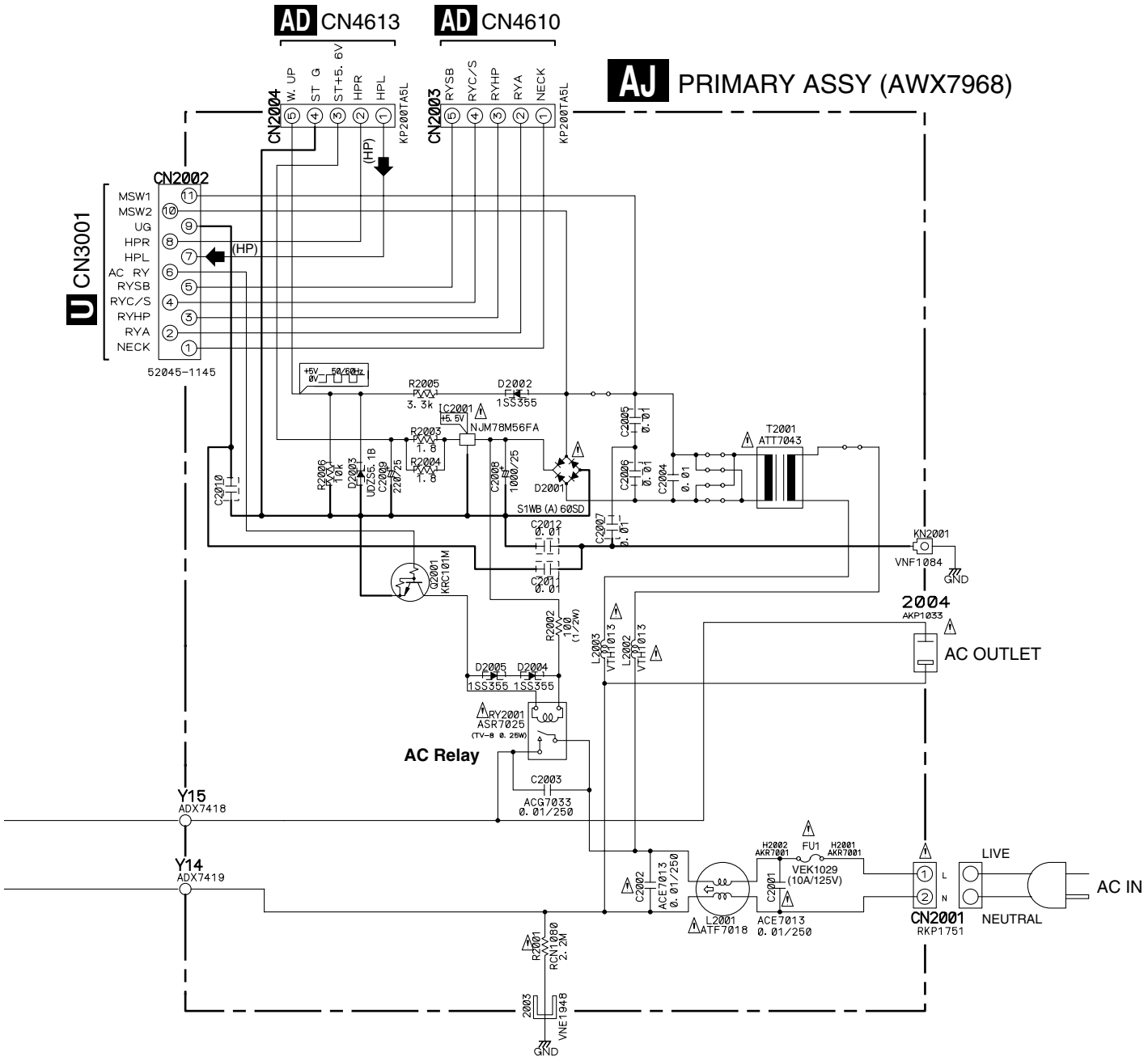
AD SP/PS ASSY (VSX-55TXi : AWX8307) (VSX-53TX : AWX7975)



3.23 TRANS 2-2, TRANS 1 and PRIMARY ASSYS



(HP) : AUDIO SIGNAL ROUTE (PHONES ch)



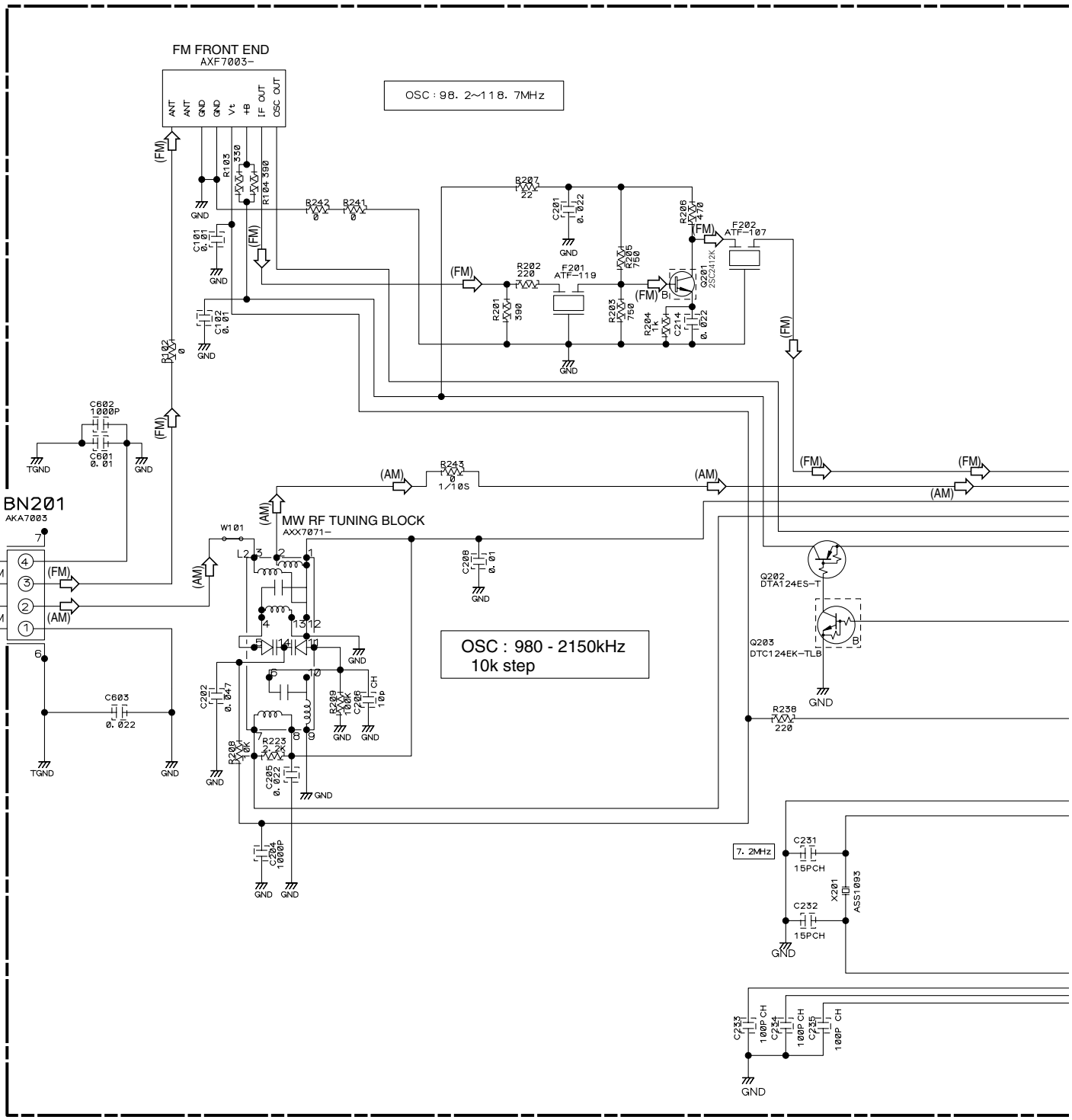
• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

AJ

3.24 FM/AM TUNER MODULE

AK FM/AM TUNER MODULE (AXQ7231)

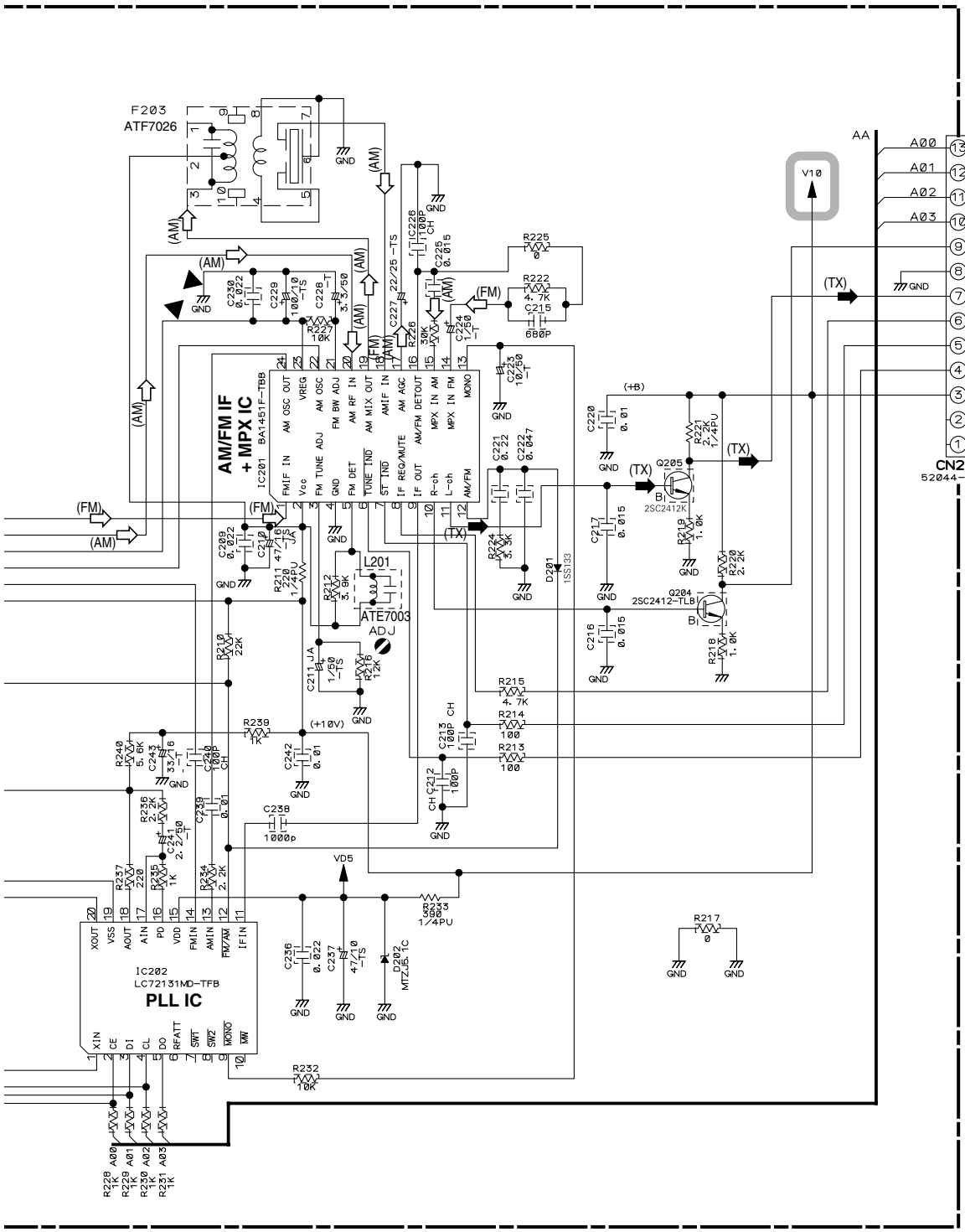


Notes

1. RESISTORS
   Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.
3. DIODES
   No mark diode is 1SS133.

(TX) ➡ : AUDIO SIGNAL ROUTE (TUNER Lch)
(AM) ⇨ : AM SIGNAL ROUTE
(FM) ⇨ : FM SIGNAL ROUTE

: The power supply is shown with the marked box.



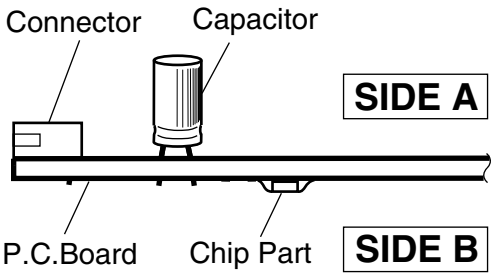
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

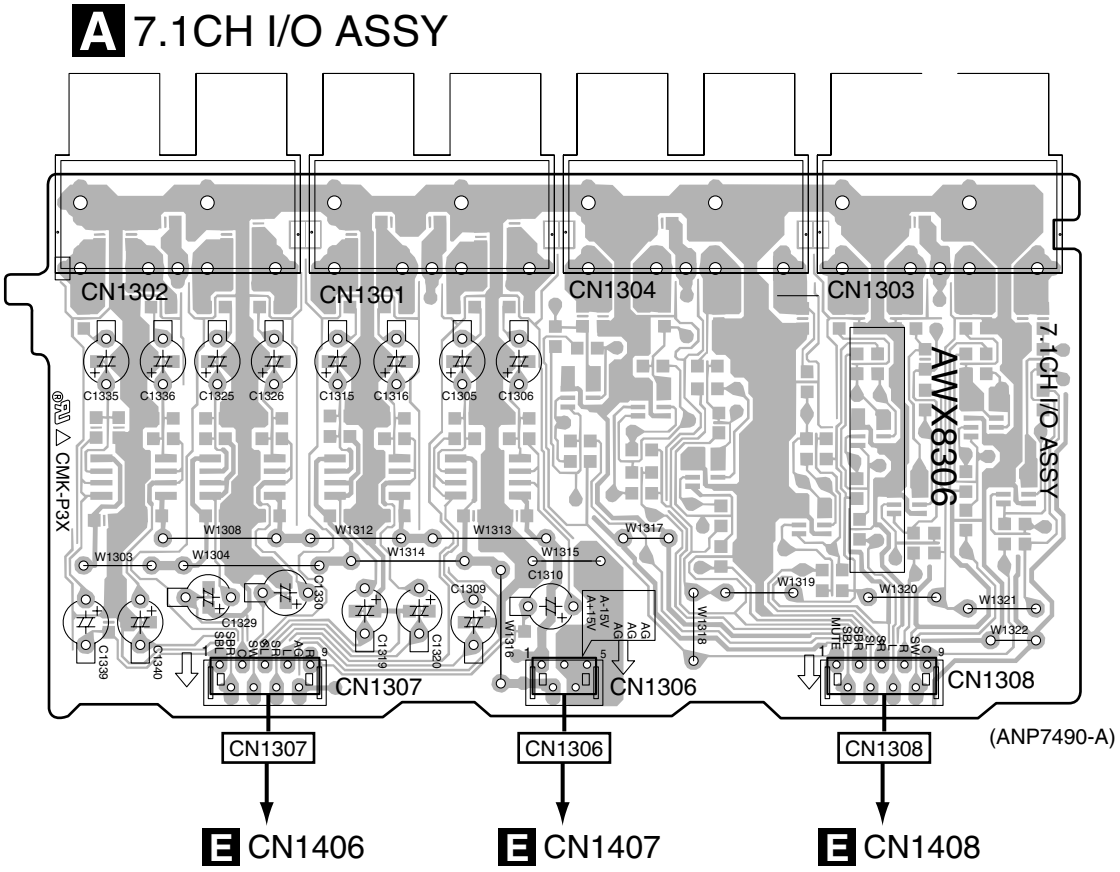
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



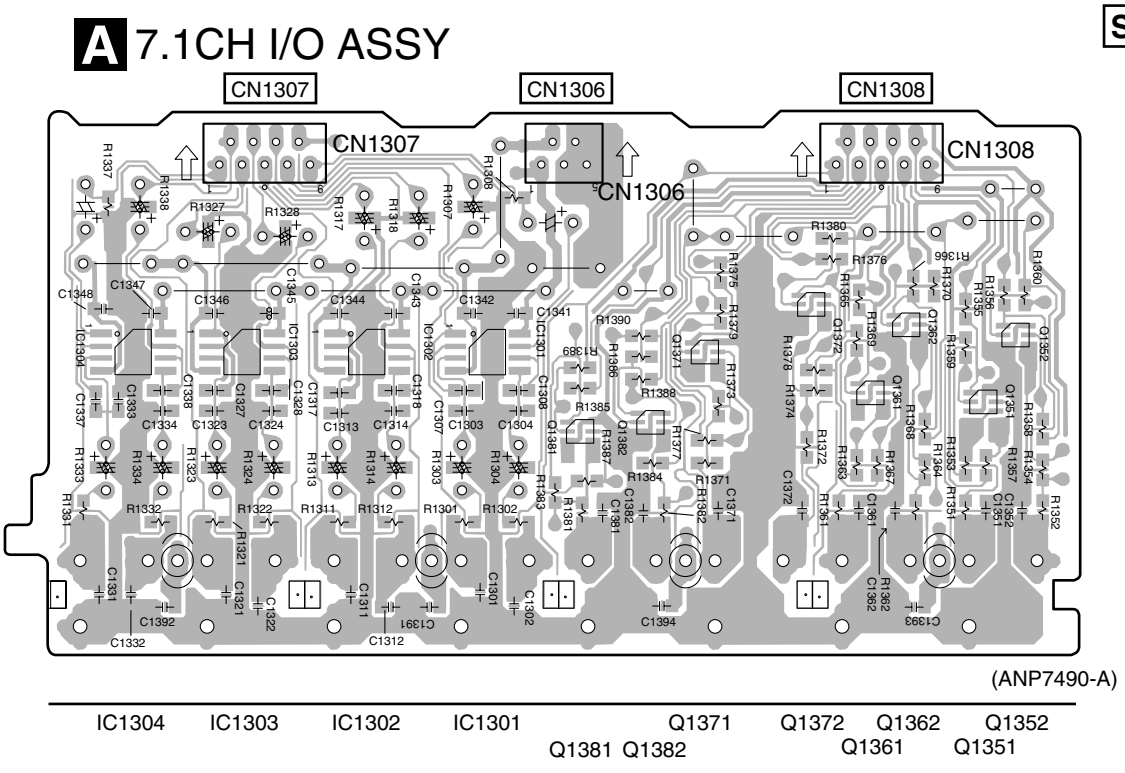
4.1 7.1CH I/O ASSY

SIDE A **SIDE A**

• **For VSX-55TXi**



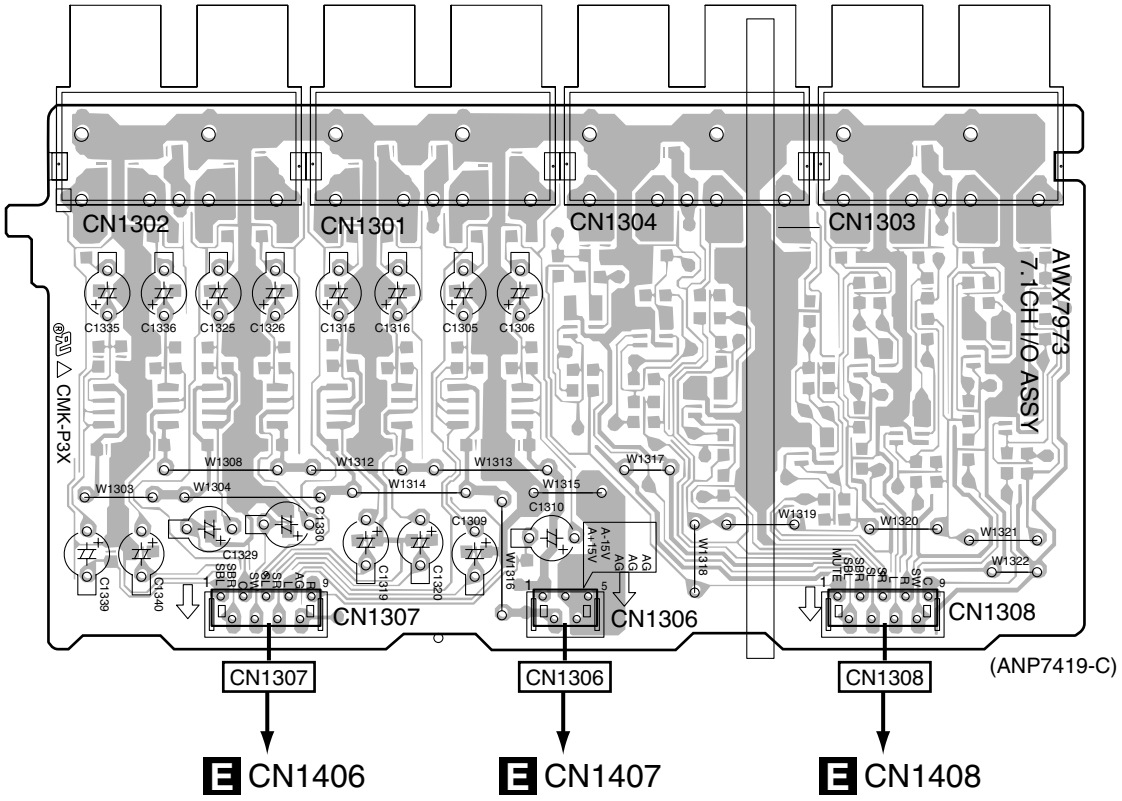
SIDE B **SIDE B**



SIDE A **SIDE A**

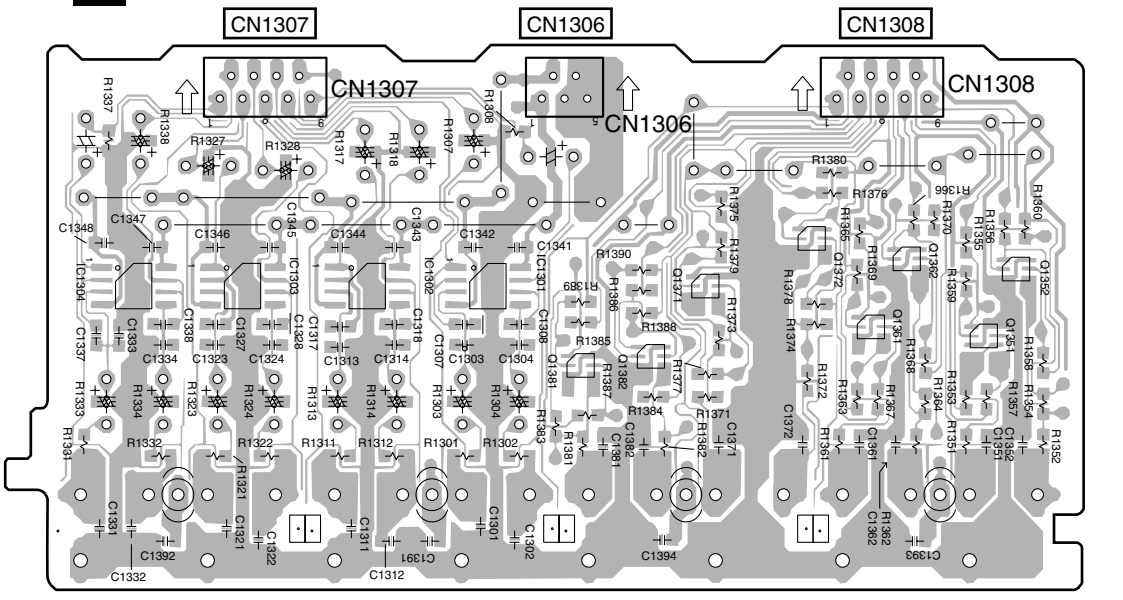
• **For VSX-53TX**

A 7.1CH I/O ASSY



SIDE B **SIDE B**

A 7.1CH I/O ASSY



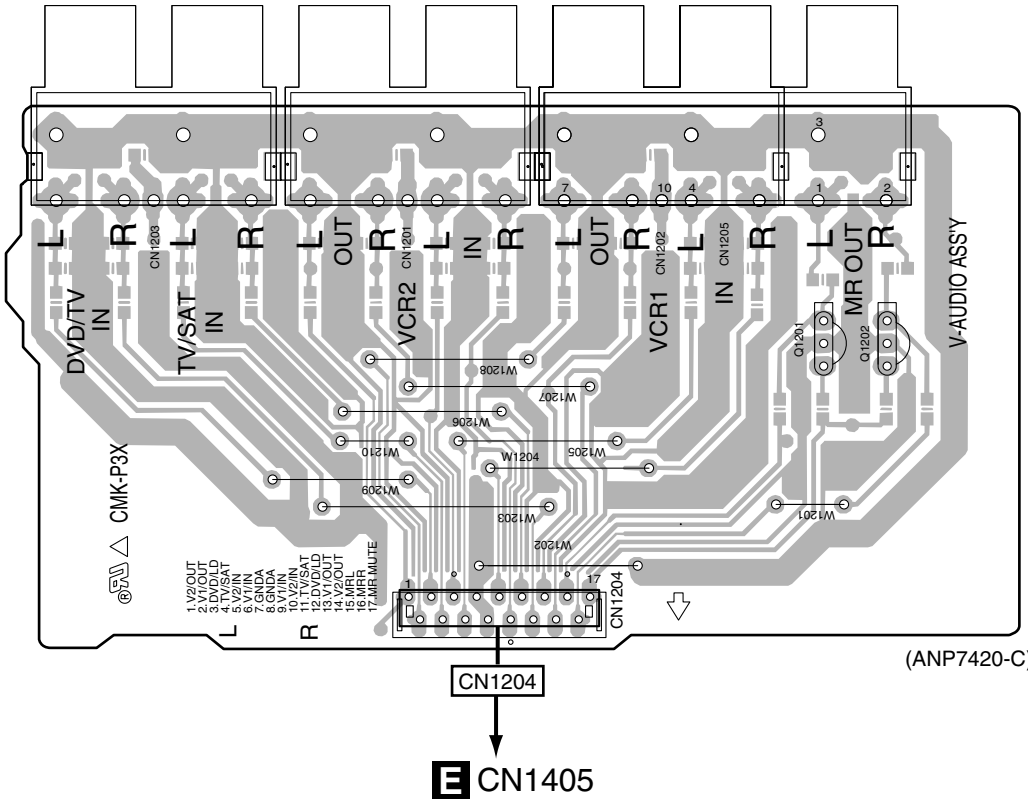
A A

4.2 V-AUDIO IN ASSY

SIDE A

SIDE A

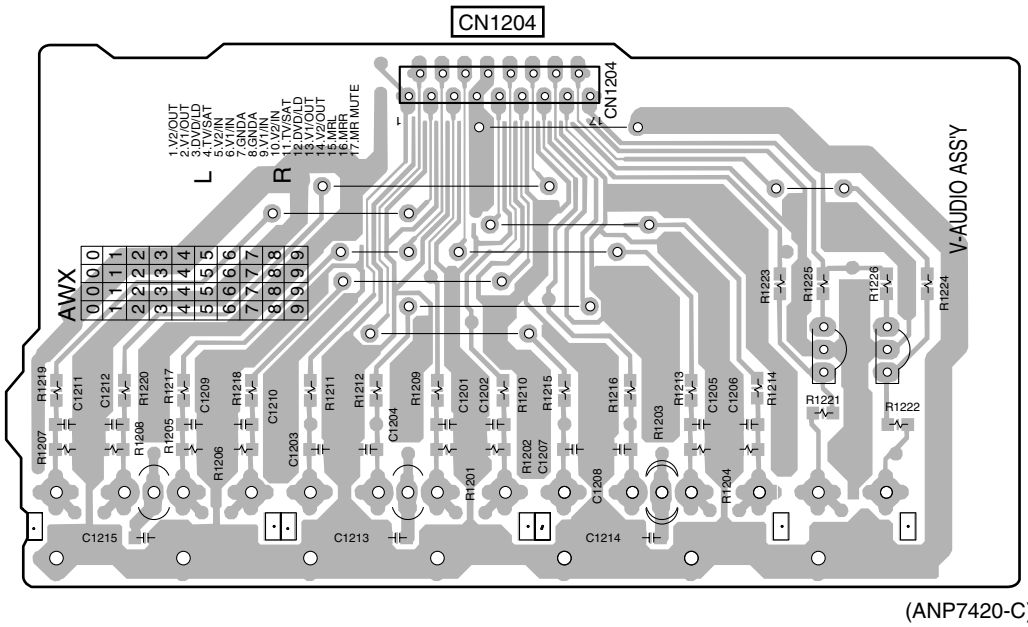
B V-AUDIO IN ASSY



SIDE B

SIDE B

B V-AUDIO IN ASSY

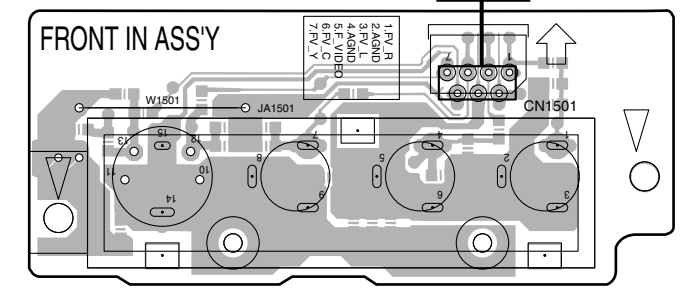


4.3 FRONT IN and OPTICAL IN ASSYS

SIDE A

U CN3005

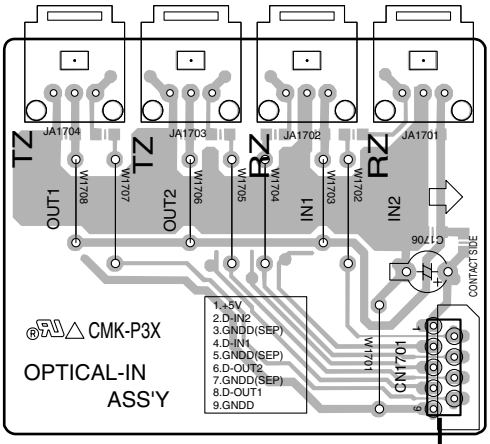
C FRONT IN ASSY



(ANP7420-C)

SIDE A

D OPTICAL IN ASSY



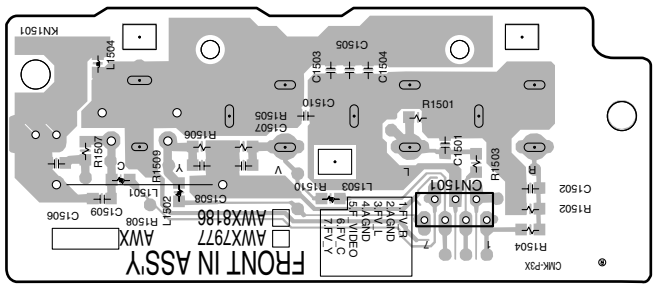
(ANP7420-C)

CN1701

H CN1801

SIDE B

C FRONT IN ASSY



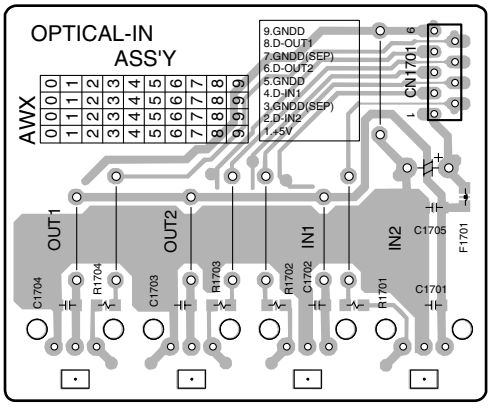
CN1501

(ANP7420-C)

SIDE B

D OPTICAL IN ASSY

CN1701



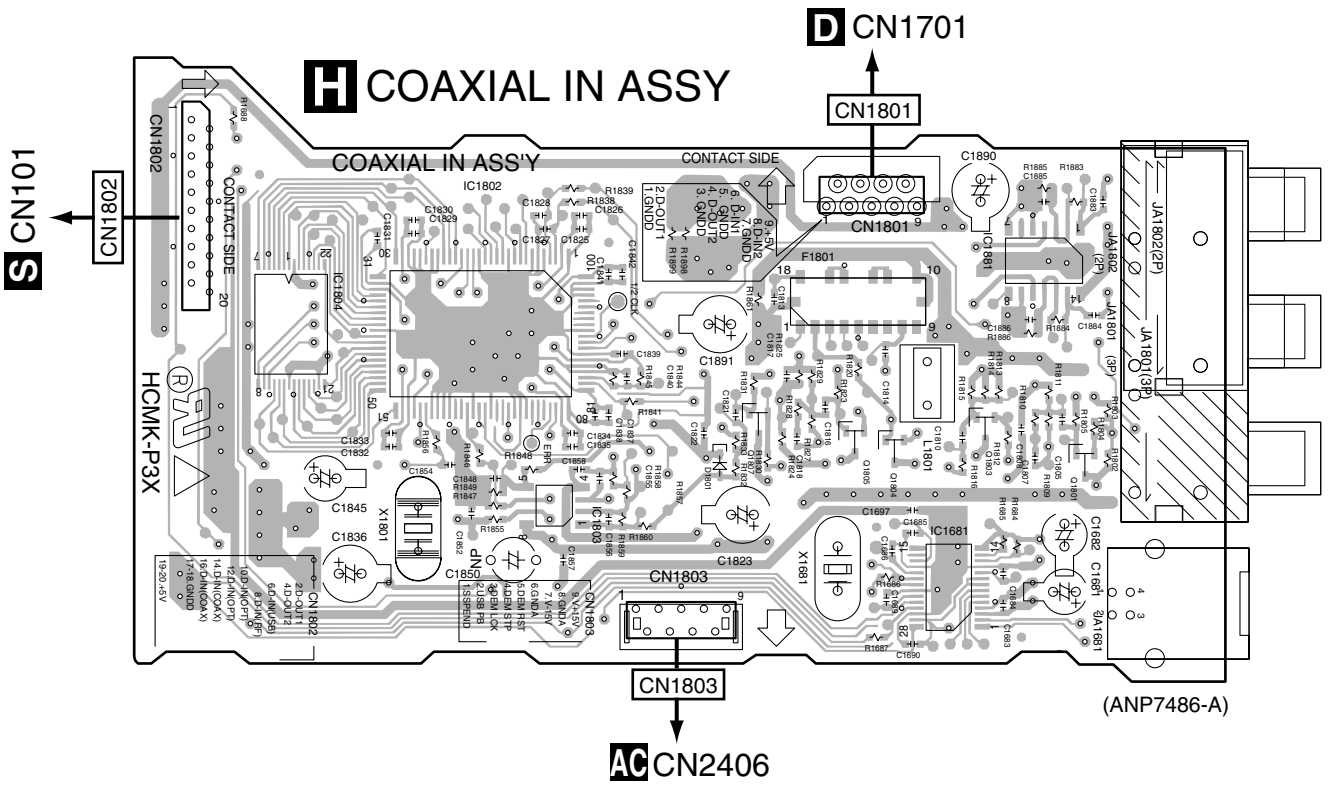
(ANP7420-C)

C **D**

C **D**

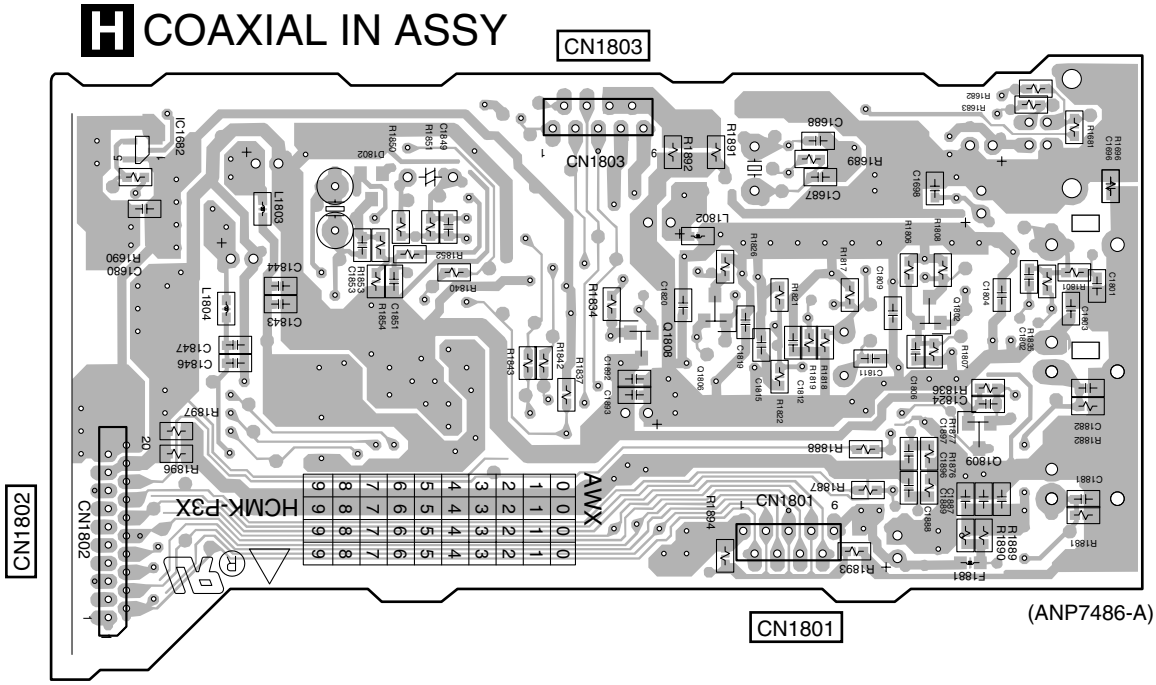
4.4 COAXIAL IN ASSY

SIDE A **SIDE A**



IC1804 IC1802 IC1803 IC1881 Q1807 Q1805 Q1804 Q1803 Q1801 IC1681

SIDE B **SIDE B**



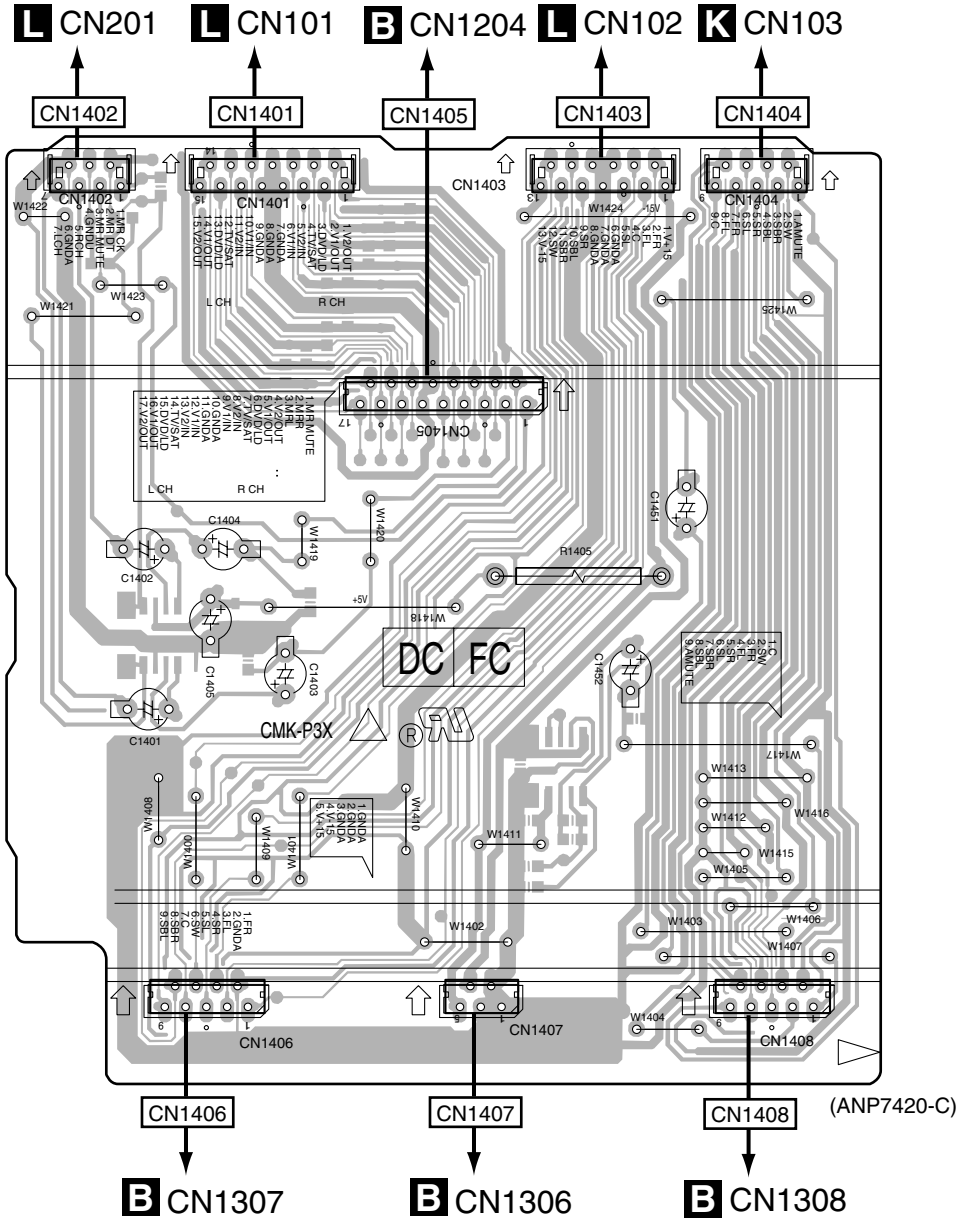
IC1682 Q1808 Q1806 Q1802 Q1809

4.5 INPUT CONNECT, RS232C and 12V TRIGGER ASSYS

SIDE A

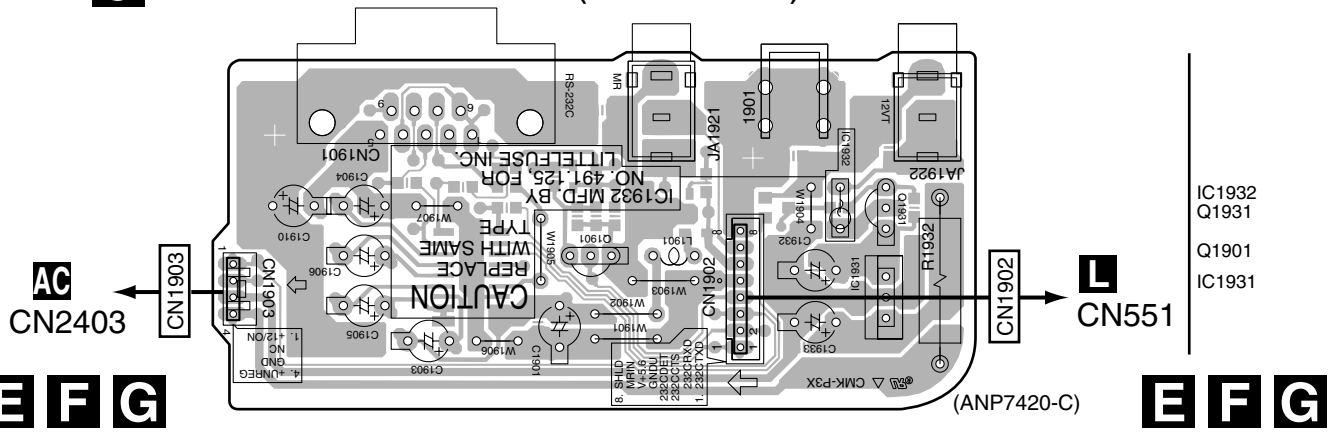
SIDE A

E INPUT CONNECT ASSY



F RS232C ASSY (VSX-55TXi)

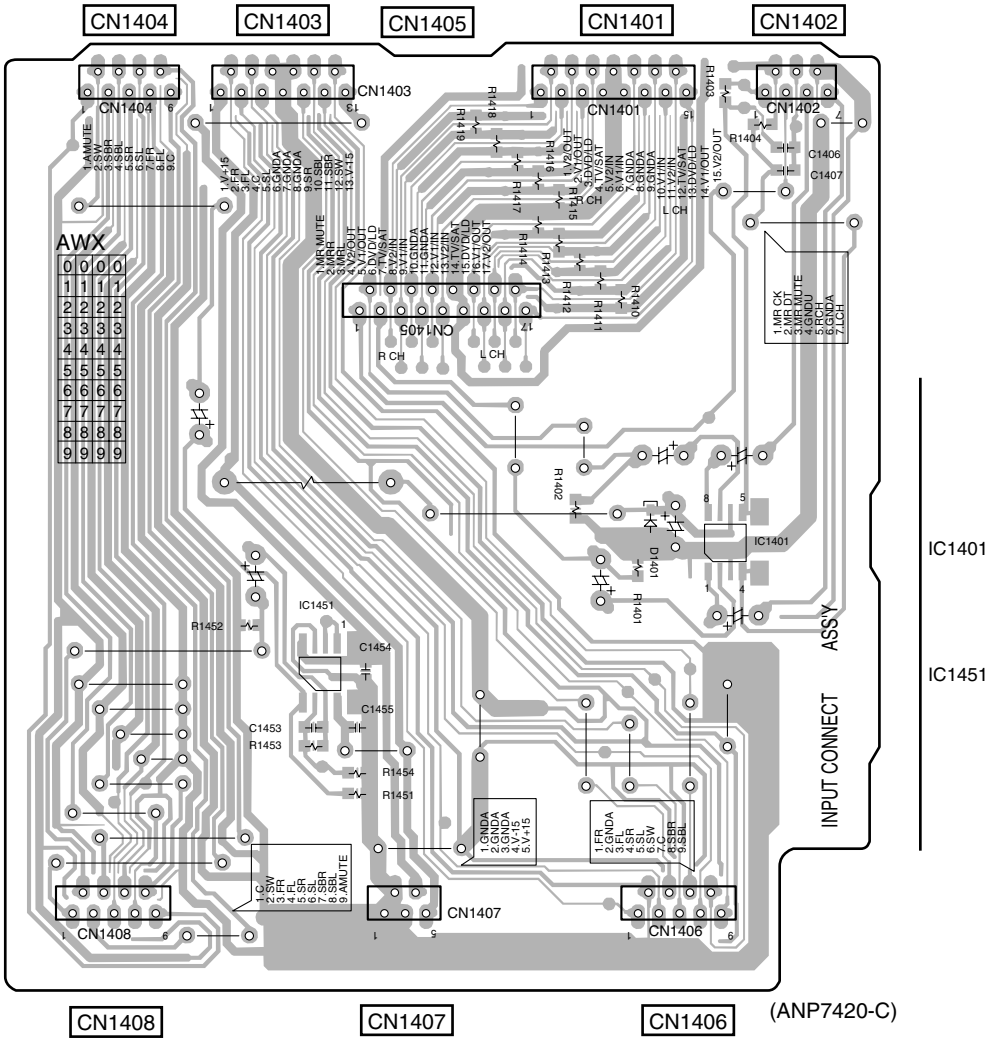
G 12V TRIGGER ASSY (VSX-53TX)



E F G

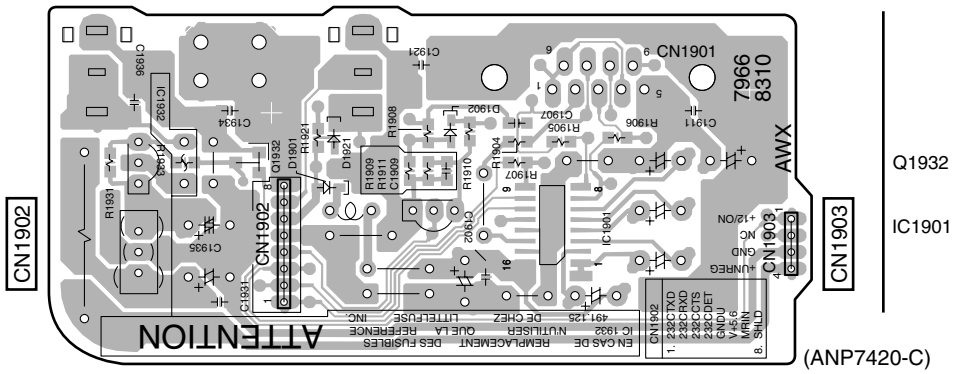
E F G

E INPUT CONNECT ASSY



F RS232C ASSY (VSX-55TXi)

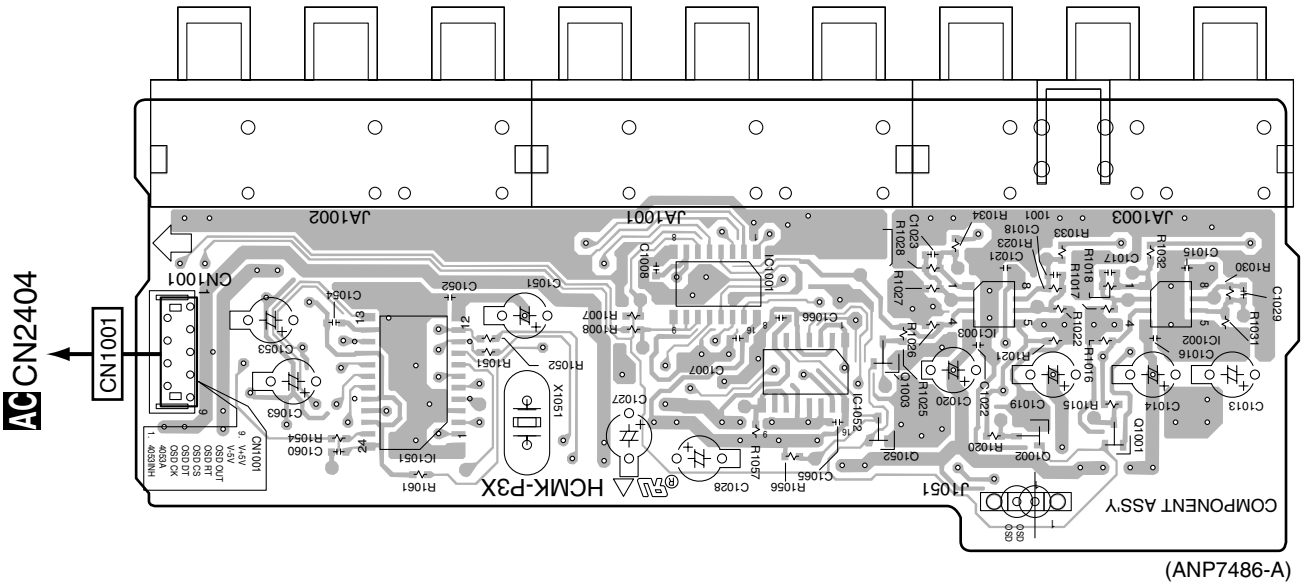
G 12V TRIGGER ASSY (VSX-53TX)



4.6 COMPONENT ASSY

SIDE A **SIDE A**

COMPONENT ASSY

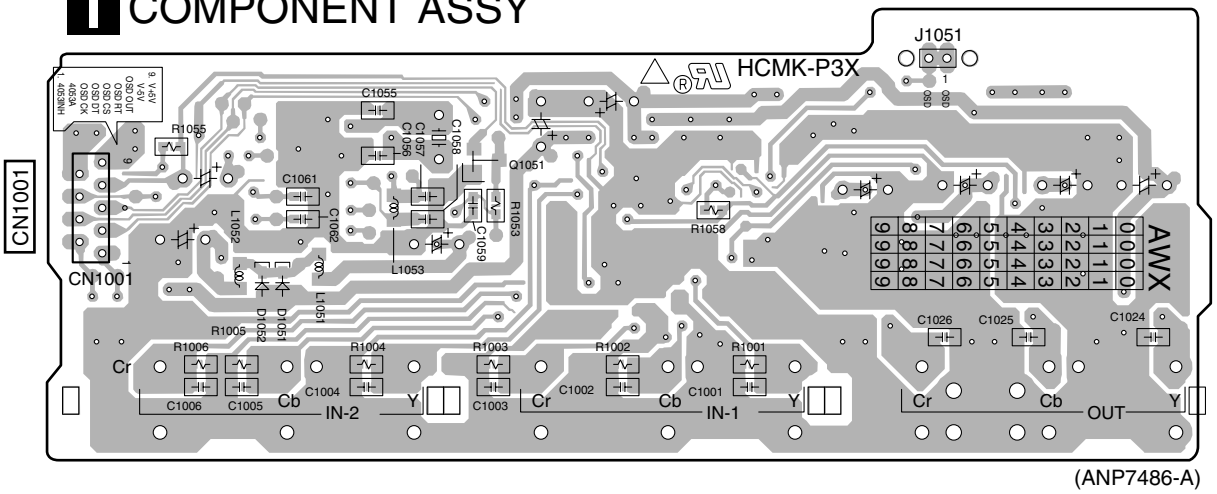


(ANP7486-A)

IC1051 IC1001 IC1052 Q1003 Q1052 IC1003 Q1002 IC1002 Q1001

SIDE B **SIDE B**

COMPONENT ASSY



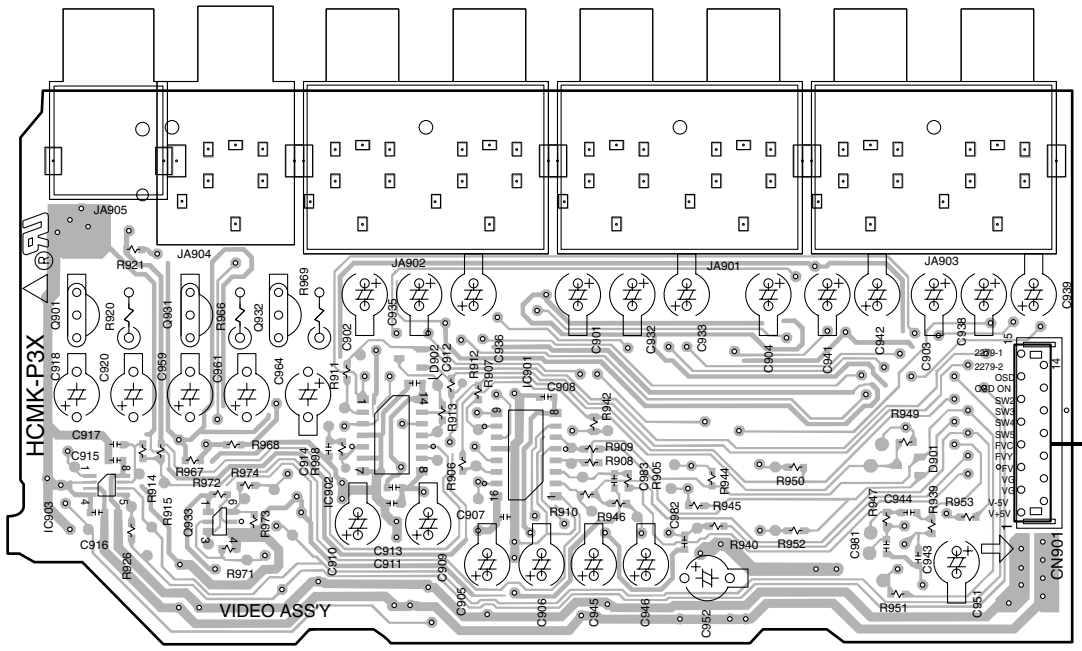
(ANP7486-A)

Q1051

4.7 VIDEO ASSY

SIDE A **SIDE A**

K VIDEO ASSY

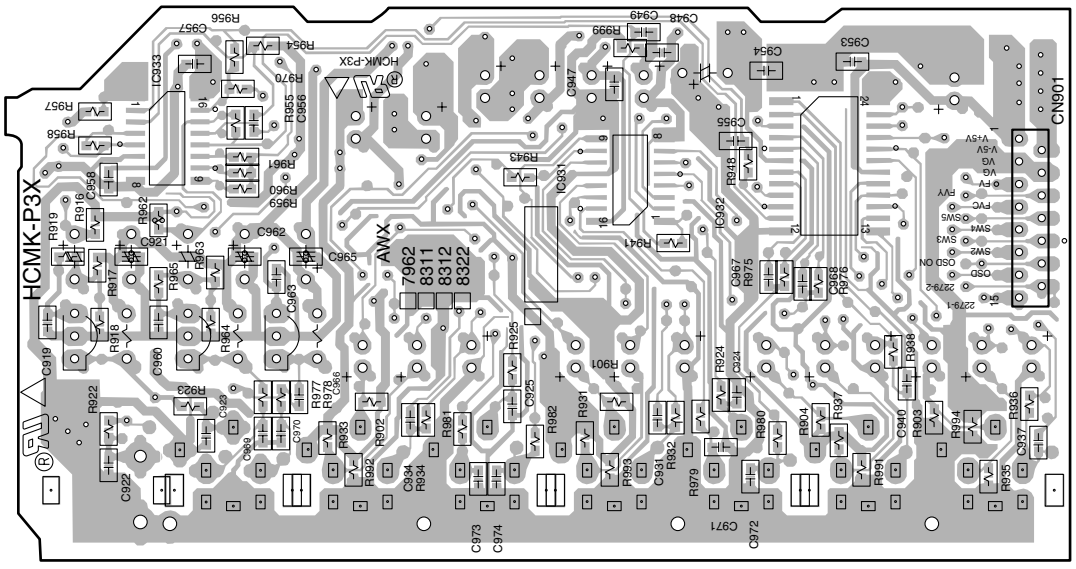


(ANP7486-A)

Q901 Q931 Q932 IC902 IC901
IC903 Q933

SIDE B **SIDE B**

K VIDEO ASSY

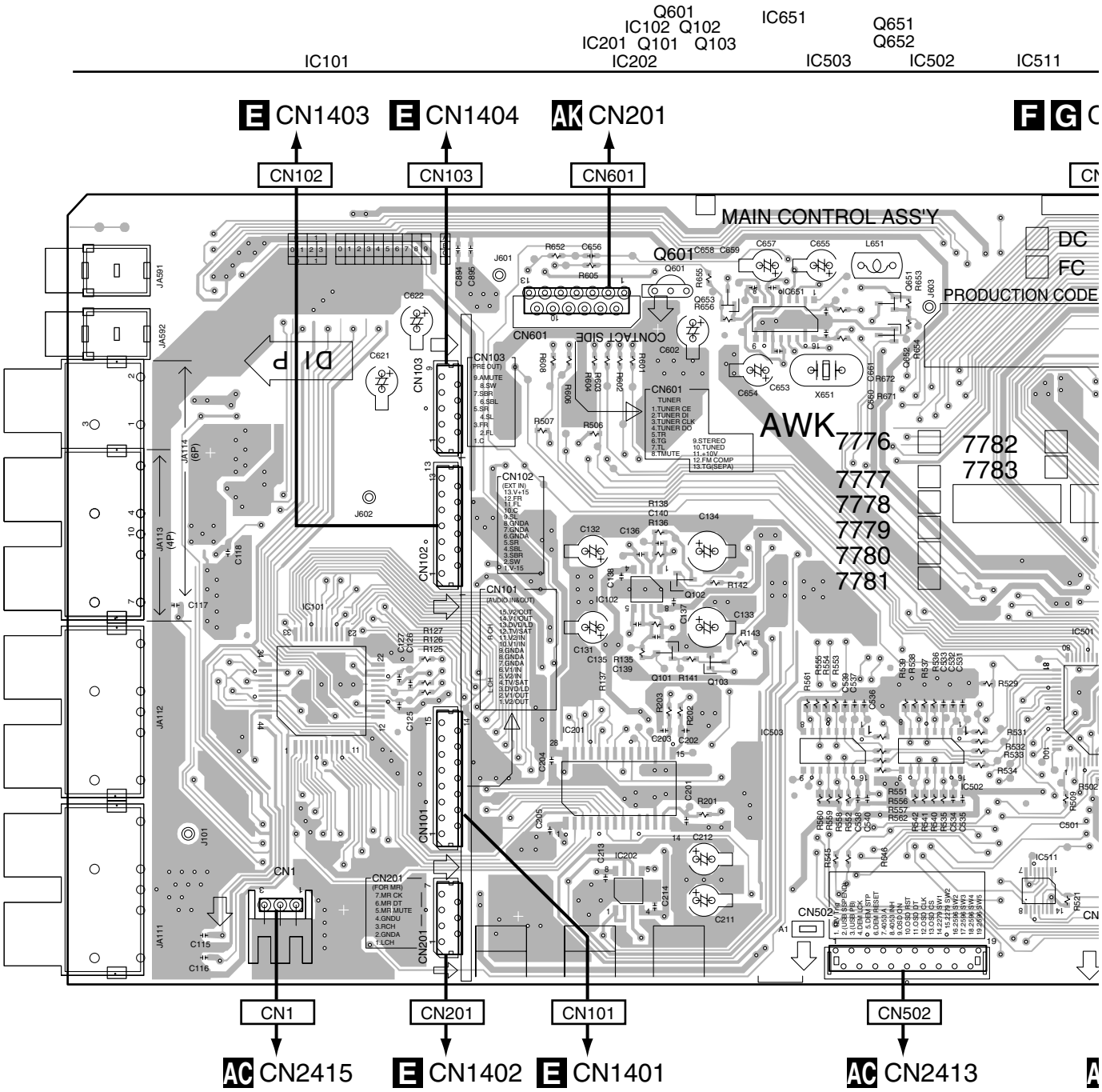


(ANP7486-A)

IC933 IC931 IC932

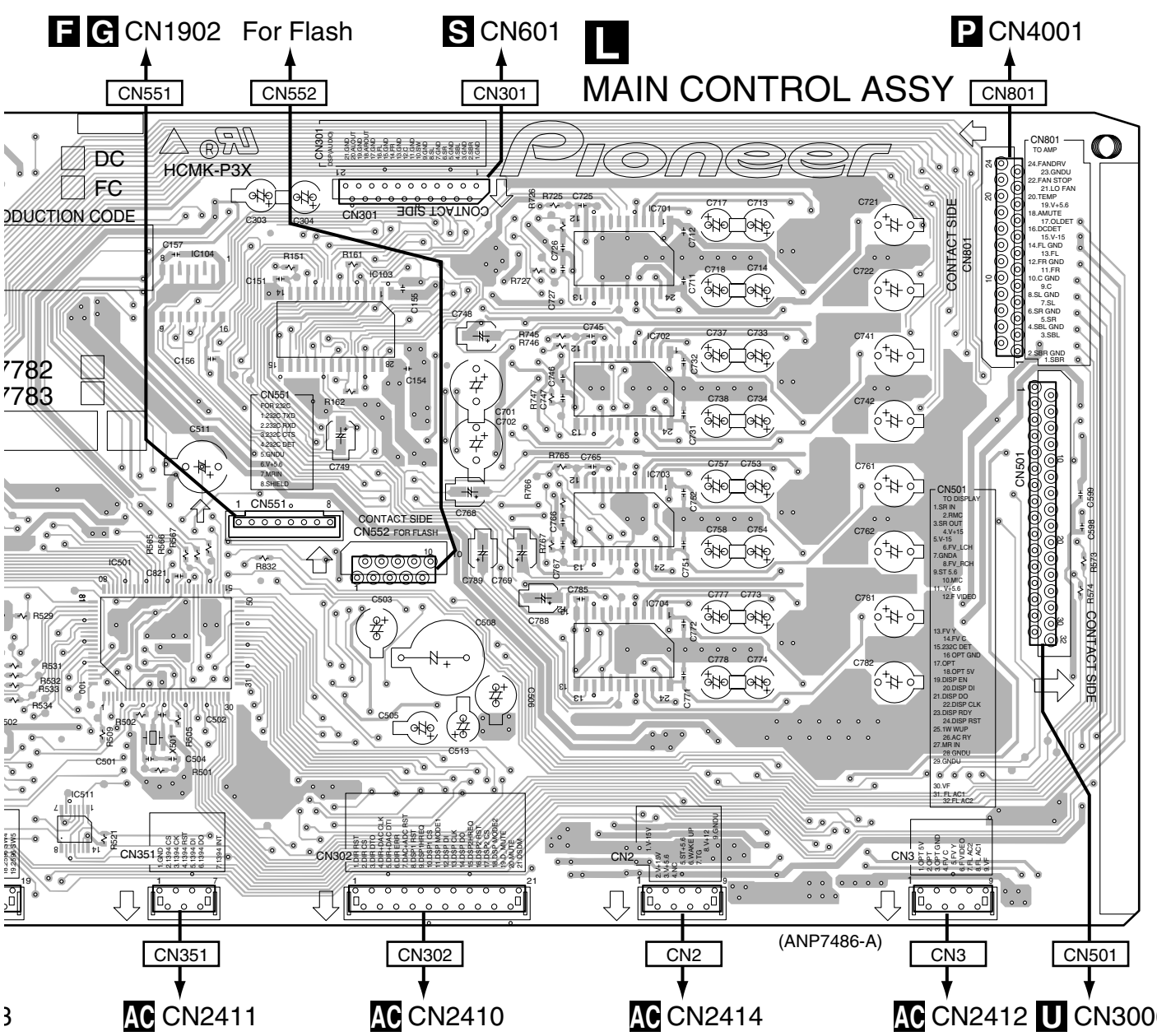
4.8 MAIN CONTROL ASSY

SIDE A



SIDE A

IC104
IC511 IC501 IC103 IC702 IC701
IC704 IC703

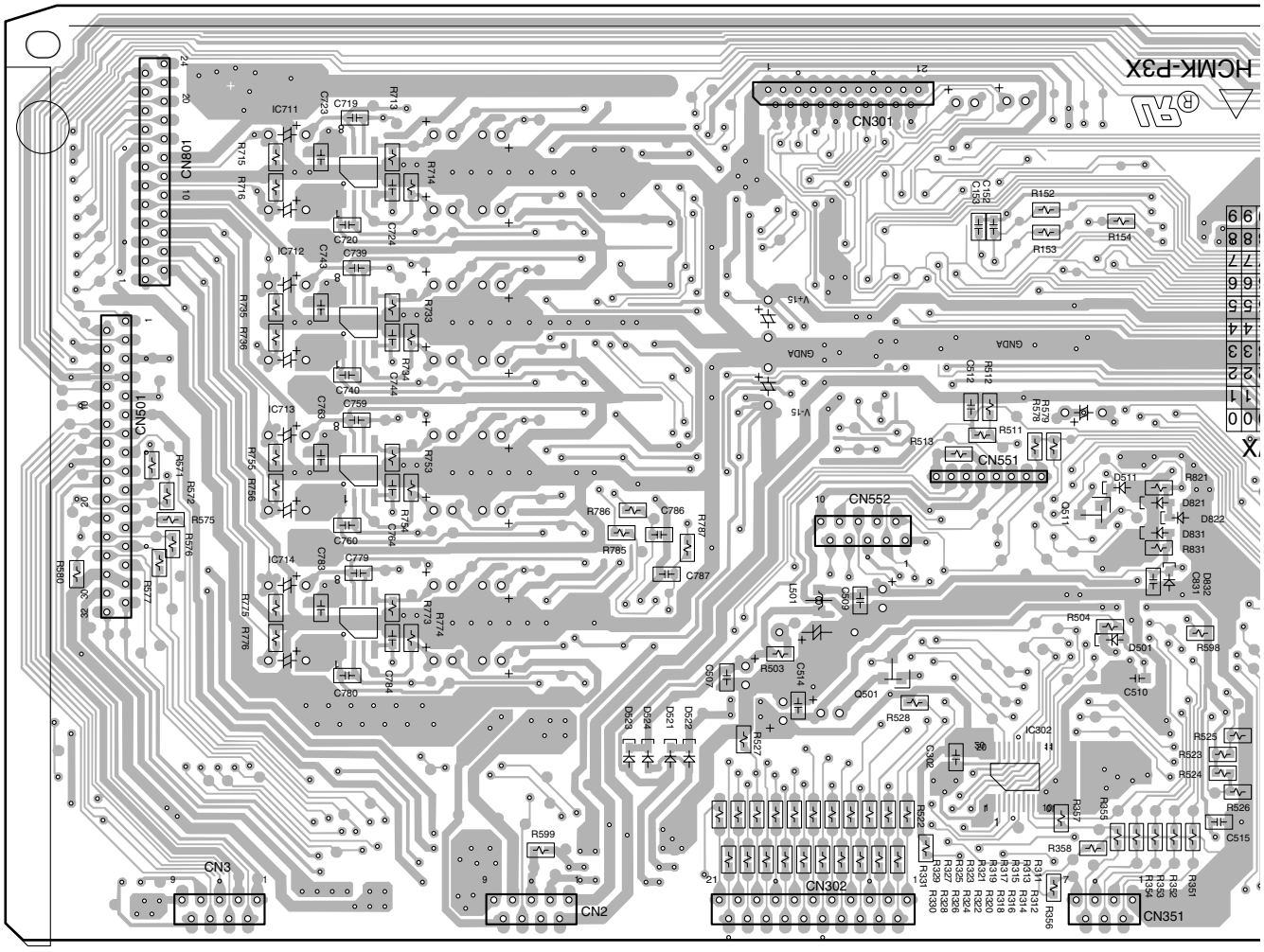


SIDE B

IC711
IC712
IC713
IC714

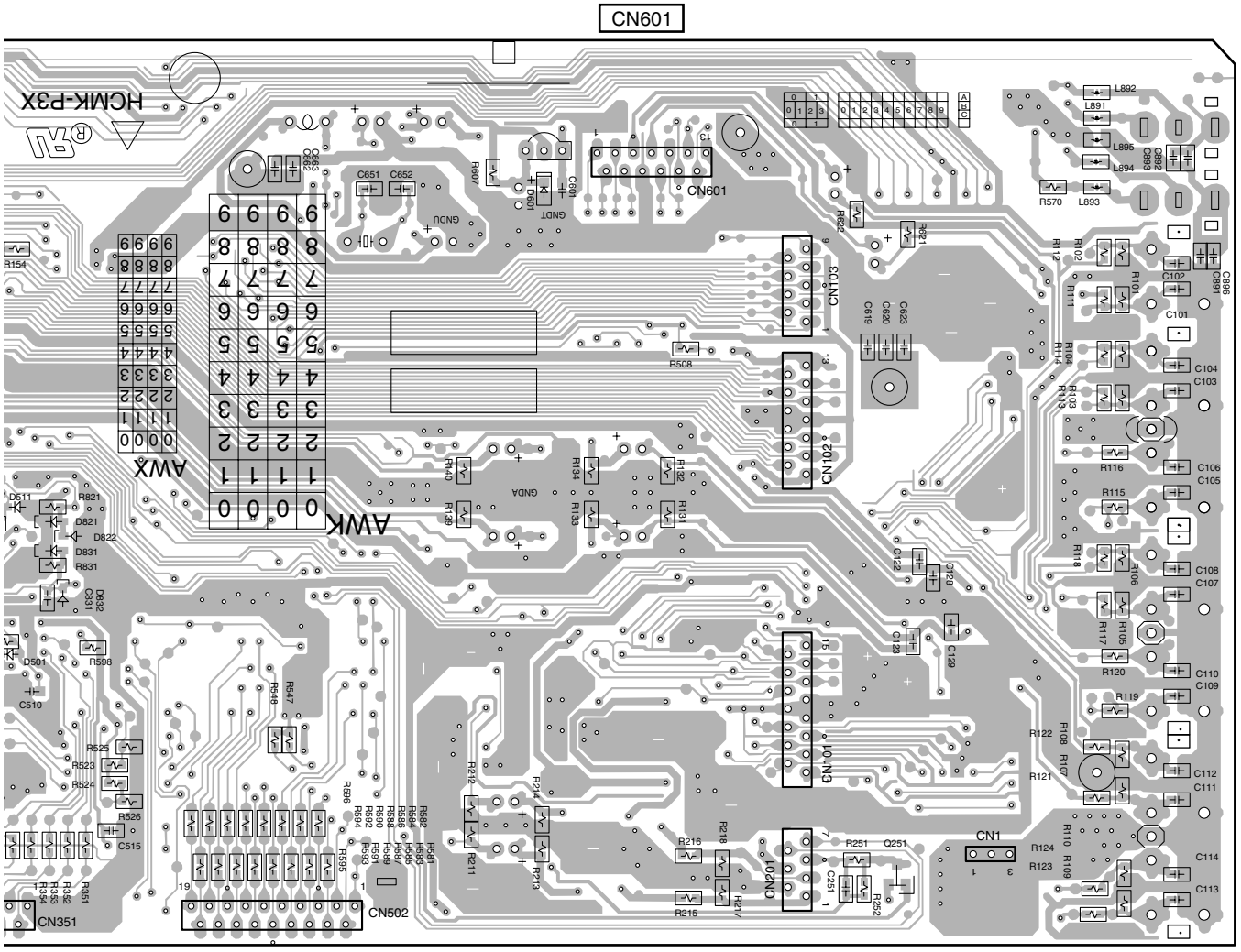
Q501 IC302 Q511

L MAIN CONTROL ASSY



SIDE B

1 Q601 Q251

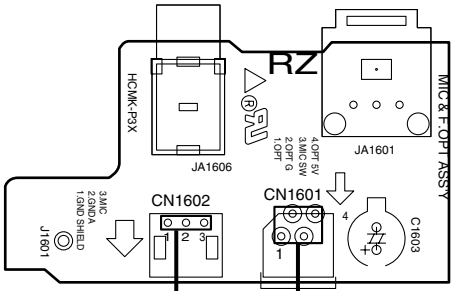


4.9 MIC & F. OPT IN, MIC AMP and DSP CONNECTION ASSYS

SIDE A

SIDE A

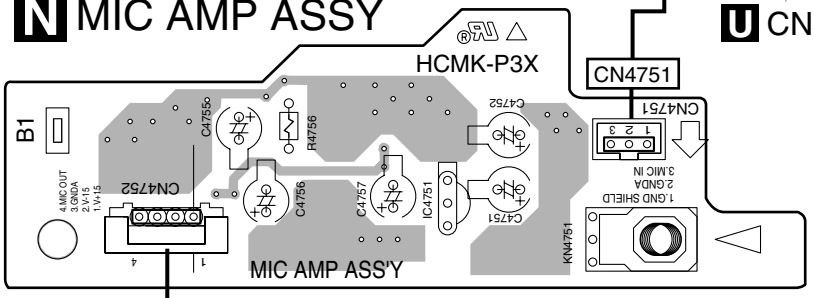
M MIC & F.OPT IN ASSY



CN1602 CN1601

U CN3004

N MIC AMP ASSY



CN4752

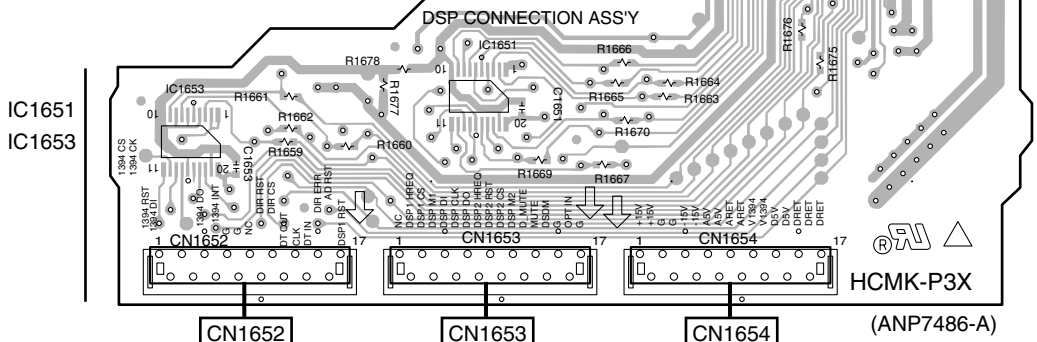
IC4751

U 3008

S CN102

CN1651

O DSP CONNECTION ASSY



CN1652 CN1653 CN1654

AC CN2407 AC CN2408 AC CN2409

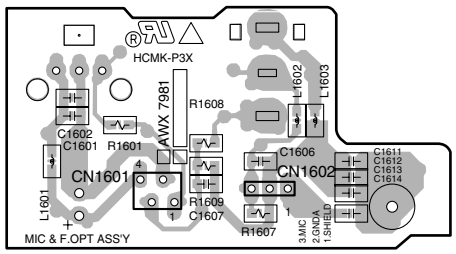
M N O

M N O

SIDE B

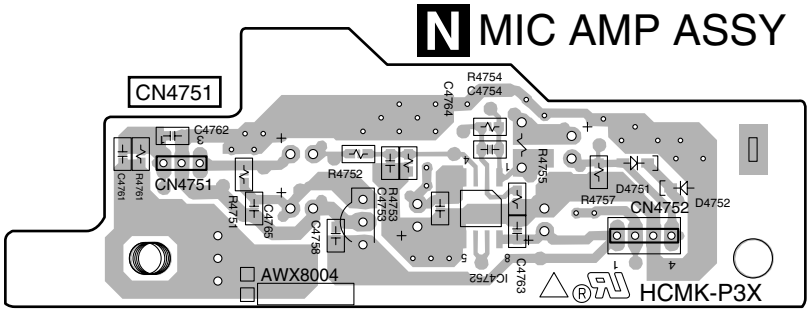
SIDE B

M MIC & F.OPT IN ASSY



CN1601 CN1602 (ANP7486-A)

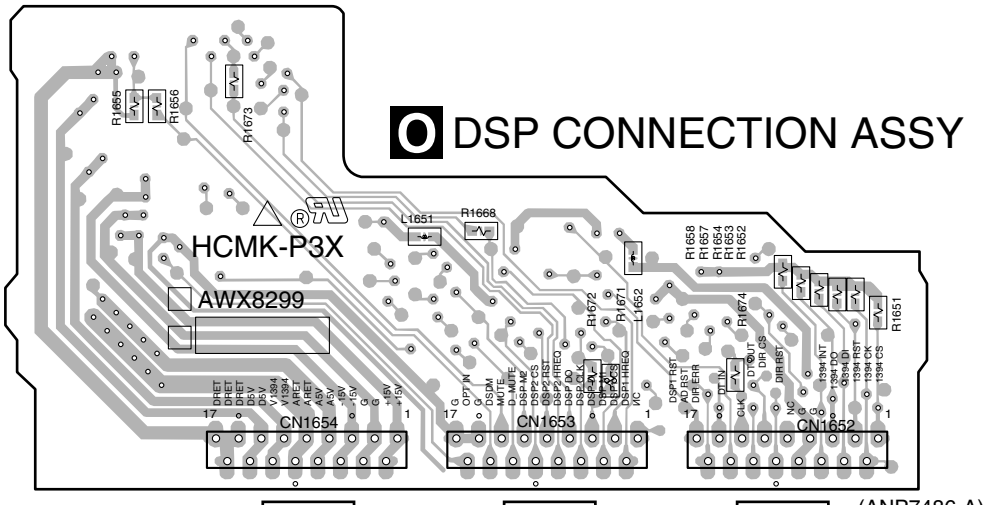
N MIC AMP ASSY



CN4752 (ANP7486-A)

IC4752

O DSP CONNECTION ASSY



CN1654 CN1653 CN1652 (ANP7486-A)

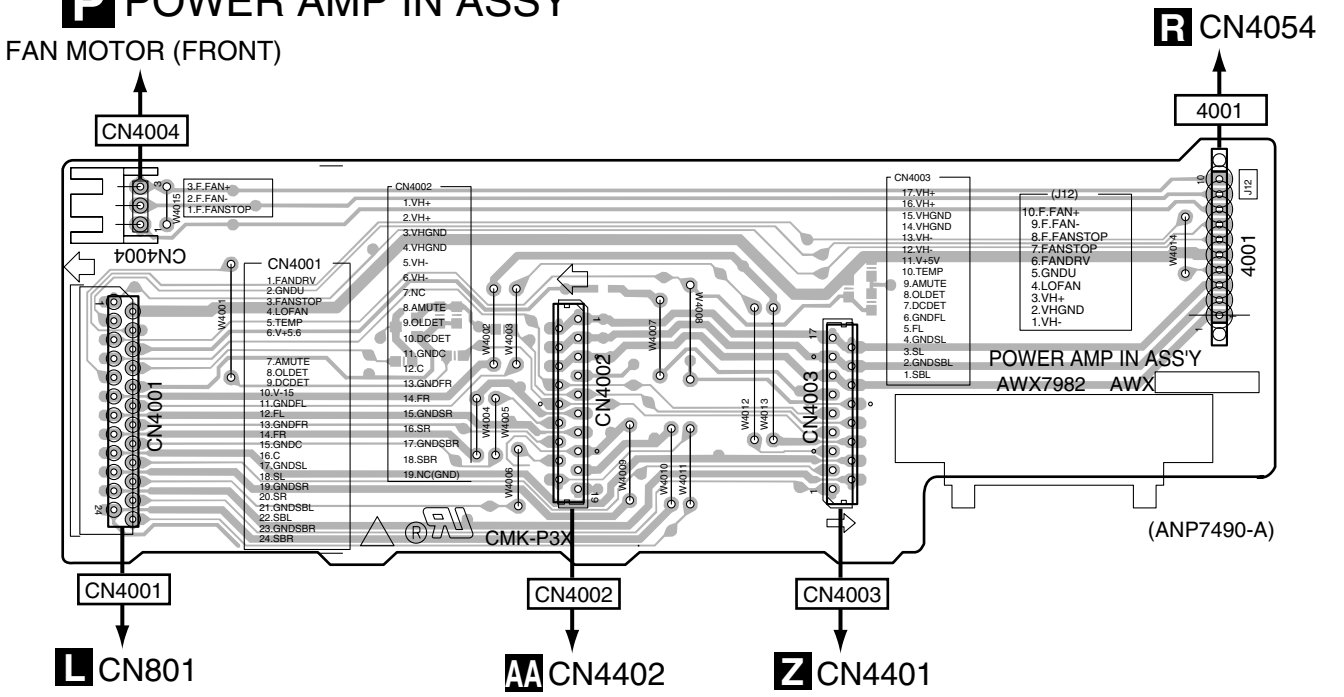
M N O

M N O

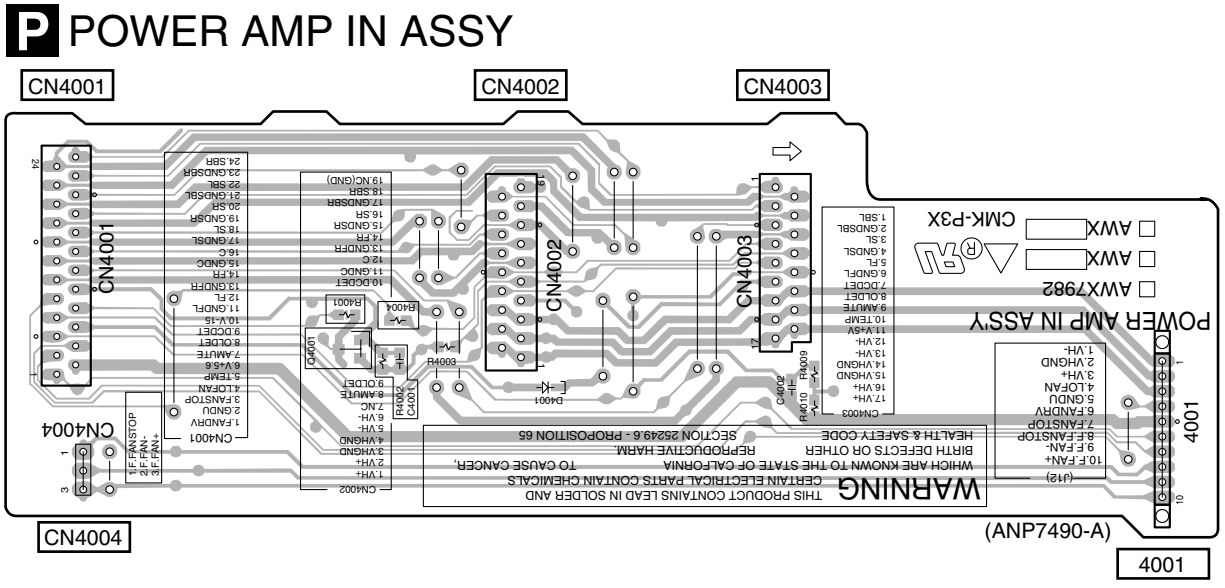
4.10 POWER AMP IN ASSY

• **For VSX-55TXi**

SIDE A **SIDE A**



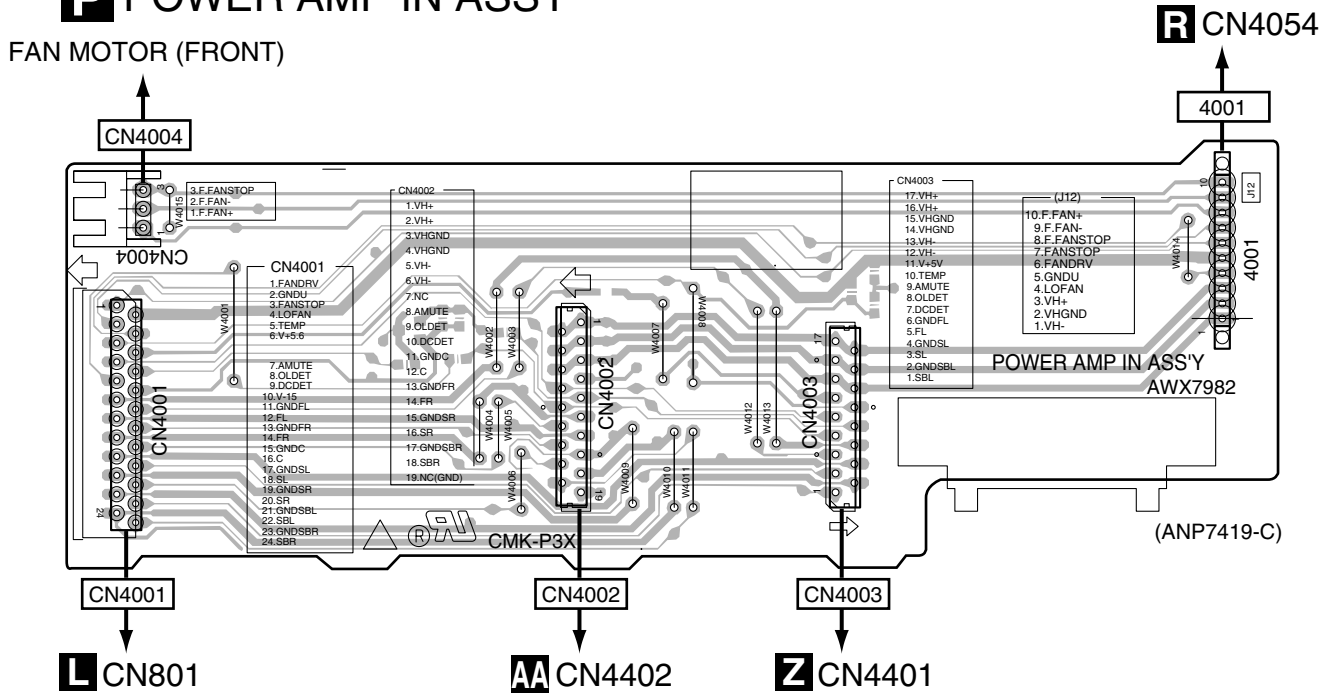
SIDE B **SIDE B**



• **For VSX-53TX**

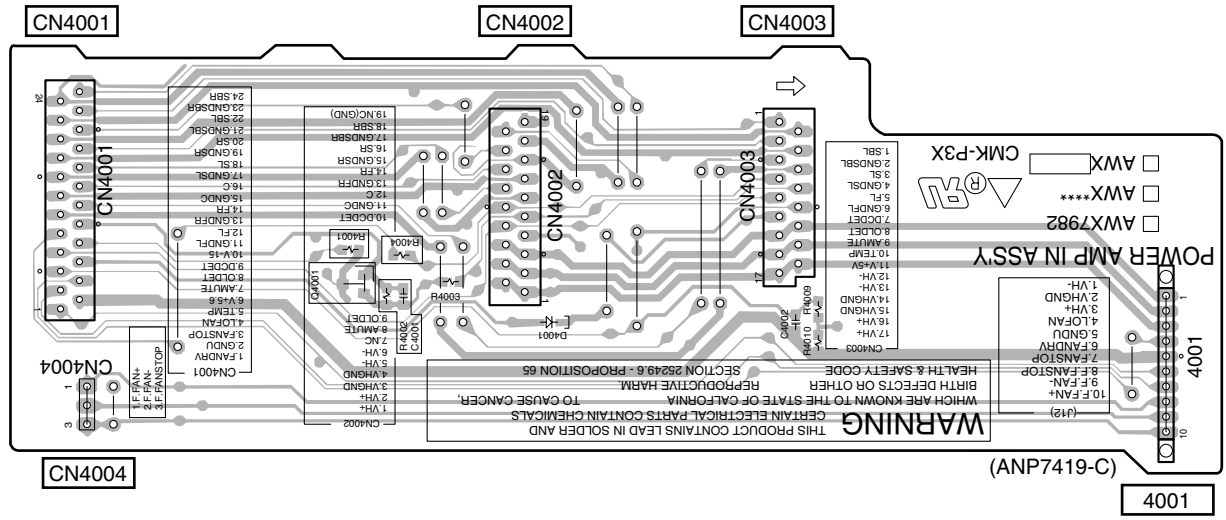
SIDE A **SIDE A**

P POWER AMP IN ASSY



SIDE B **SIDE B**

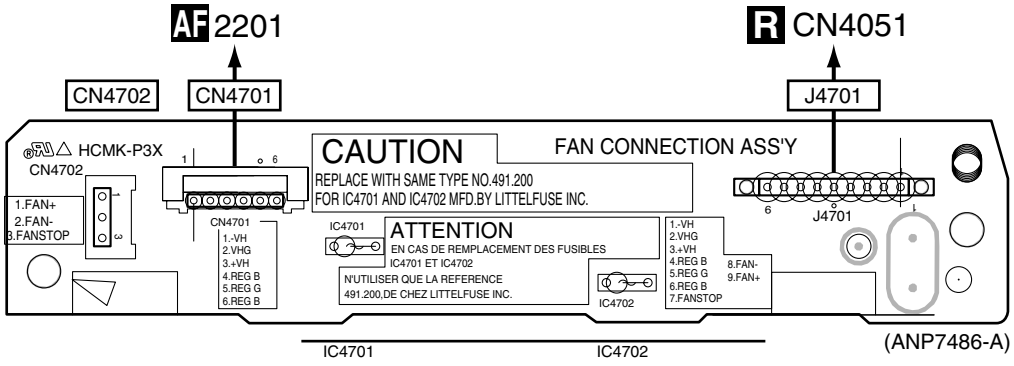
P POWER AMP IN ASSY



4.11 FAN CONNECTION ASSY

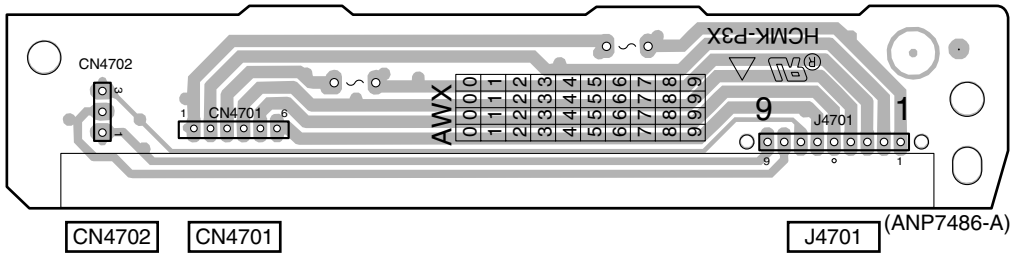
SIDE A **SIDE A**

Q FAN CONNECTION ASSY



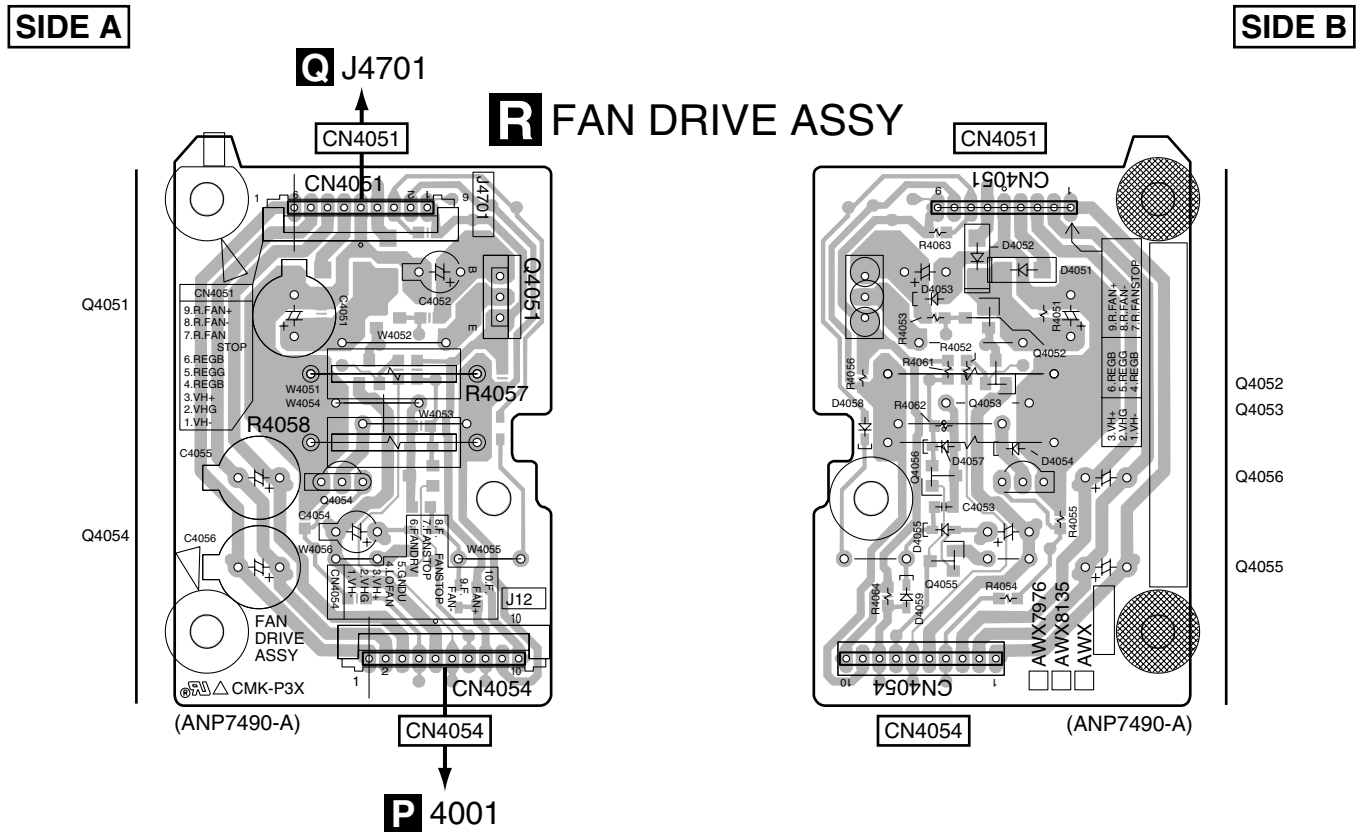
SIDE B **SIDE B**

Q FAN CONNECTION ASSY

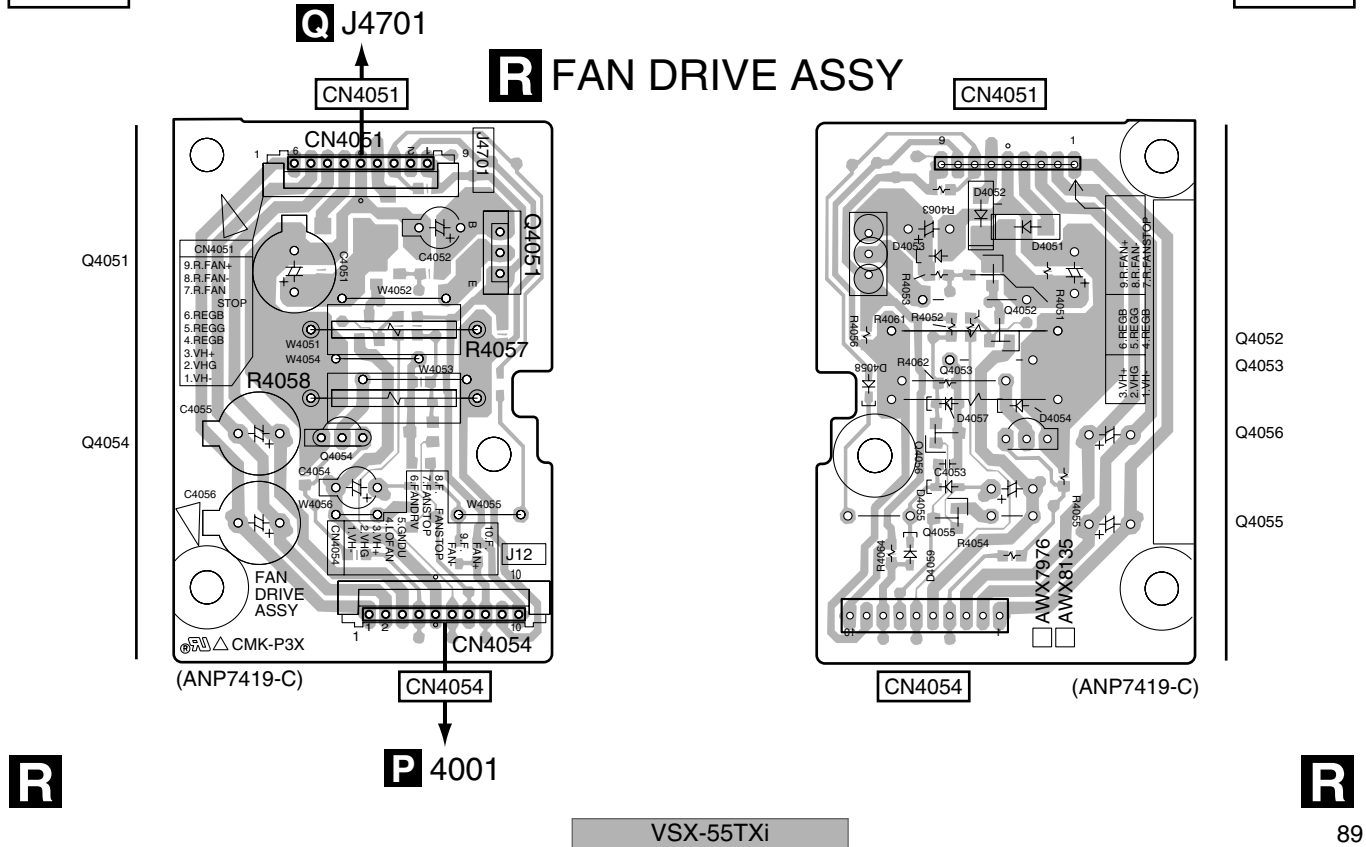


4.12 FAN DRIVE ASSY

• For VSX-55TXi



• For VSX-53TX

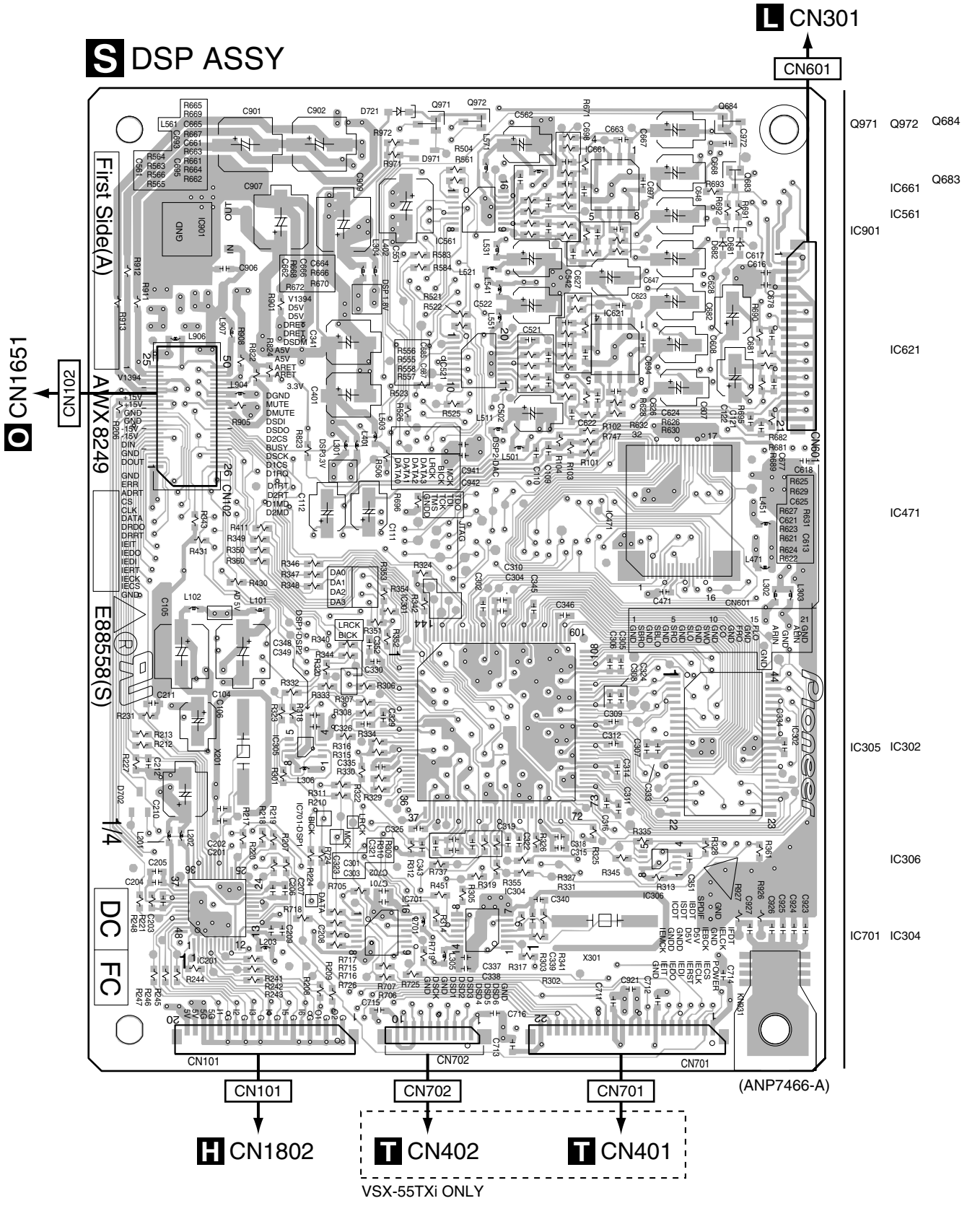


4.13 DSP ASSY

SIDE A

SIDE A

- This diagram has four layers.
  In the two middle layers, mainy Vcc and GND are connected.

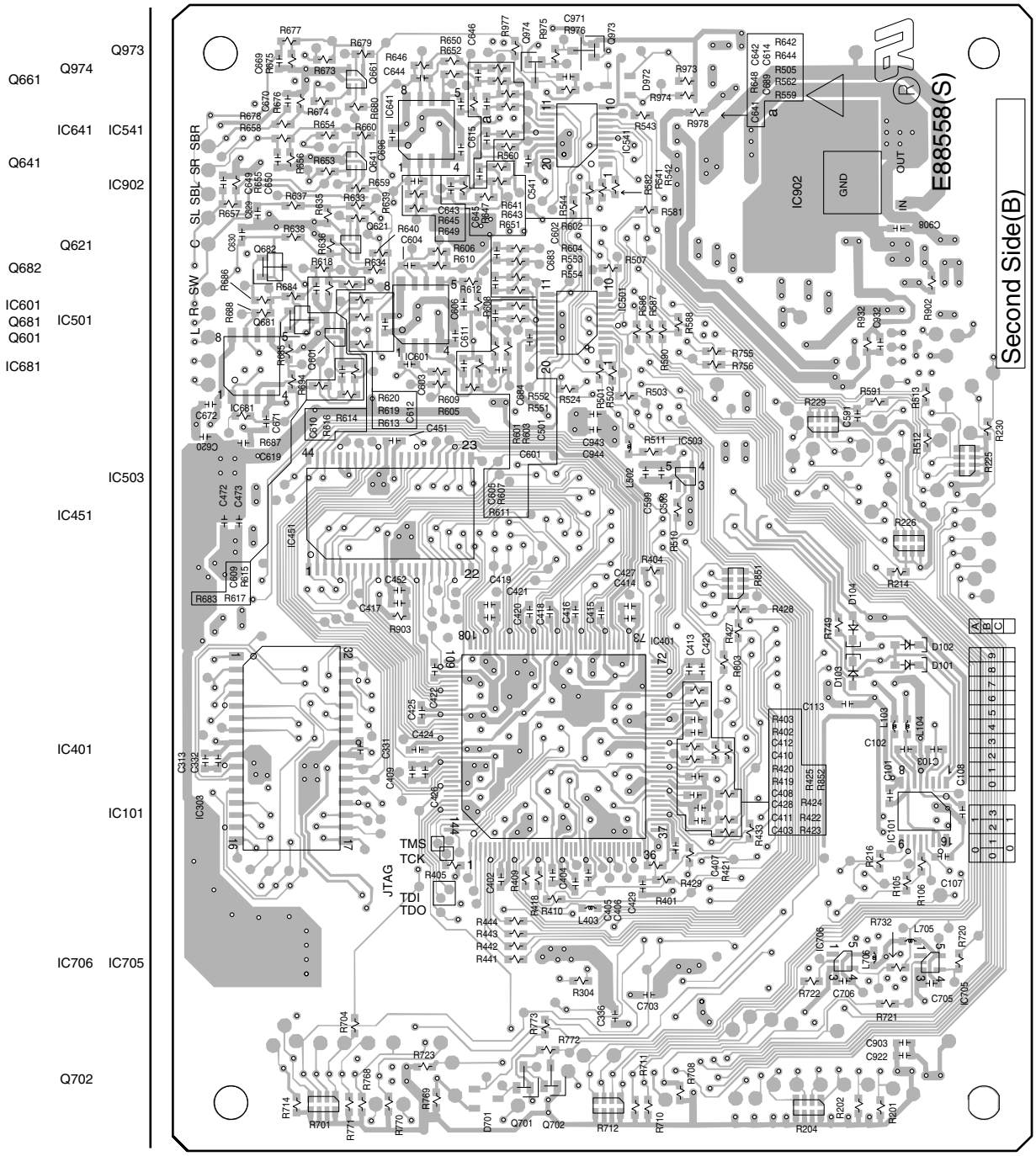


SIDE B

SIDE B

- This diagram has four layers.
  In the two middle layers, mainy Vcc and GND are connected.

S DSP ASSY

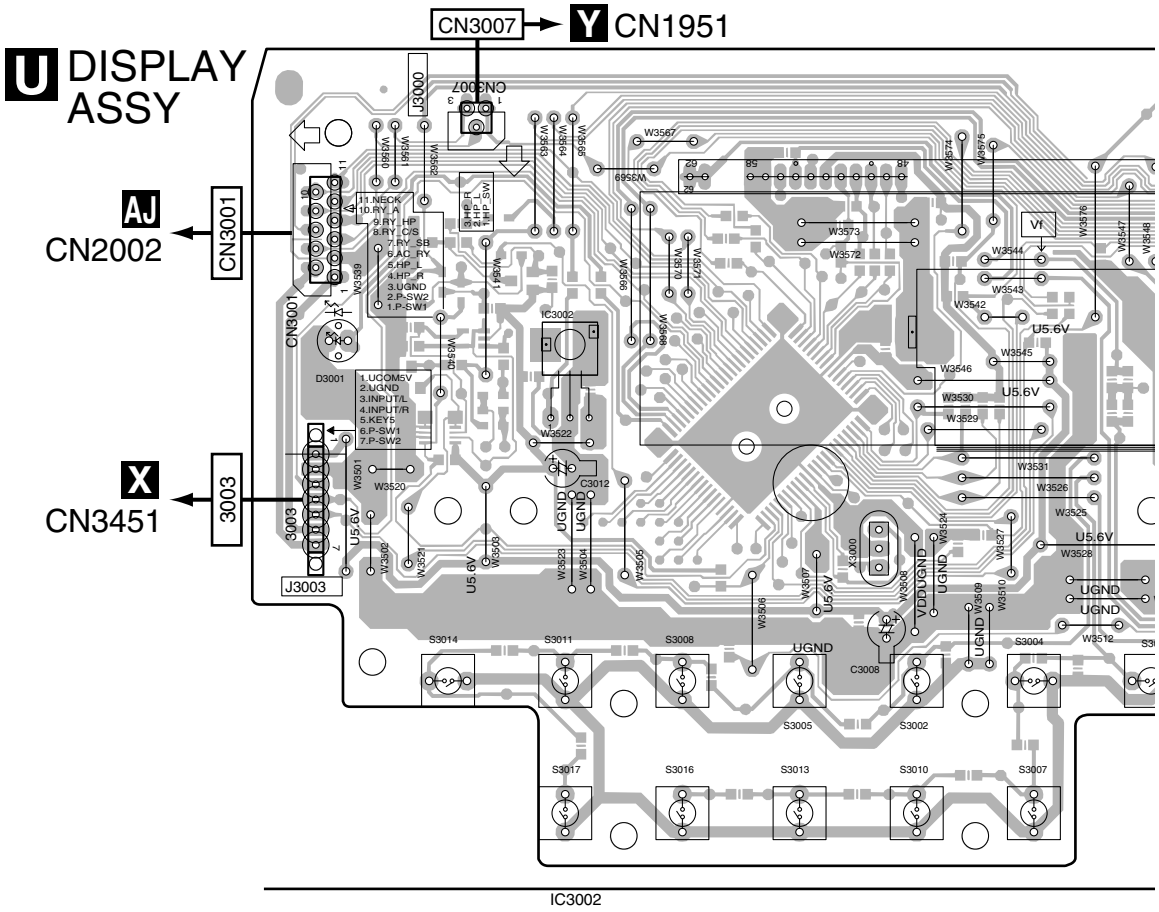


(ANP7466-A)

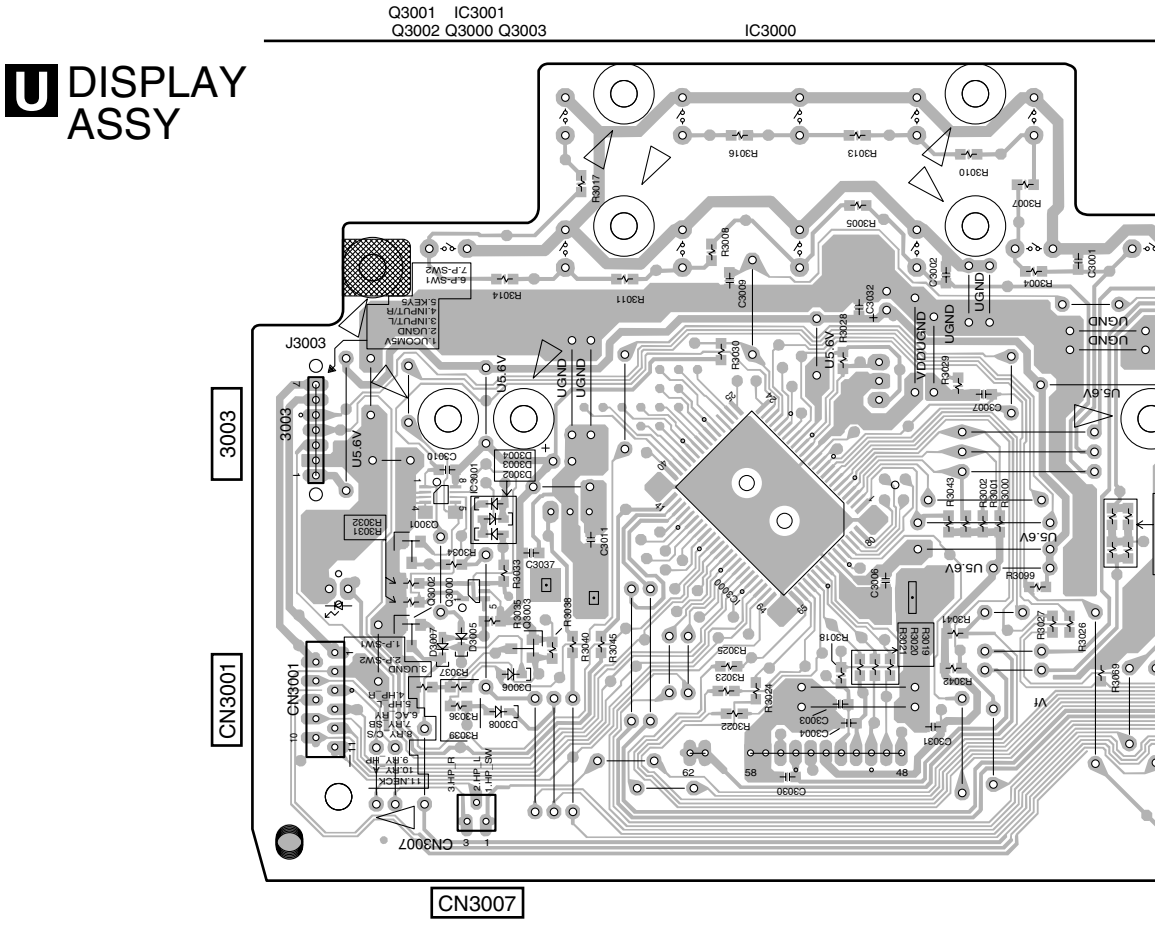
4.14 DISPLAY ASSY

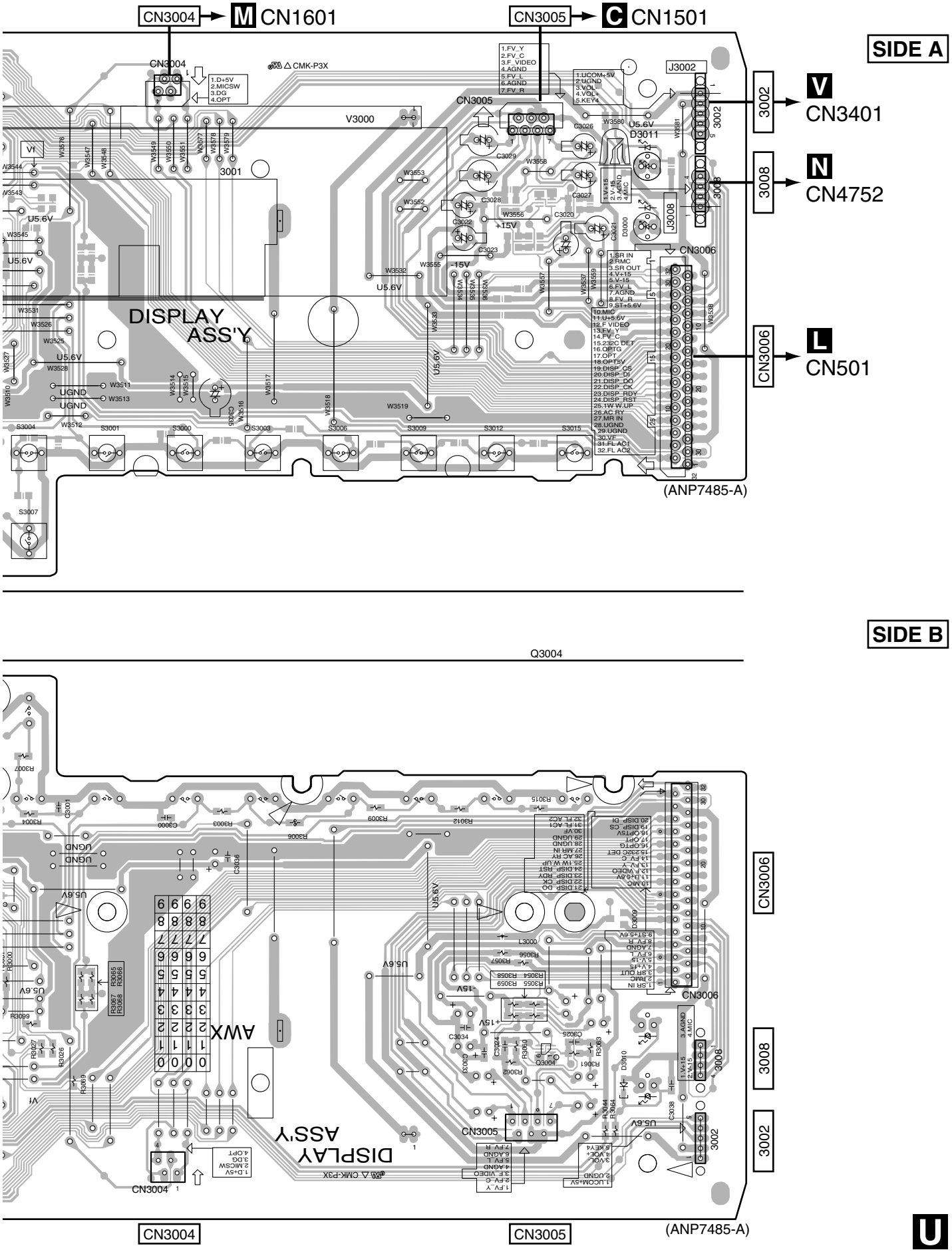
• **For VSX-55TXi**

SIDE A



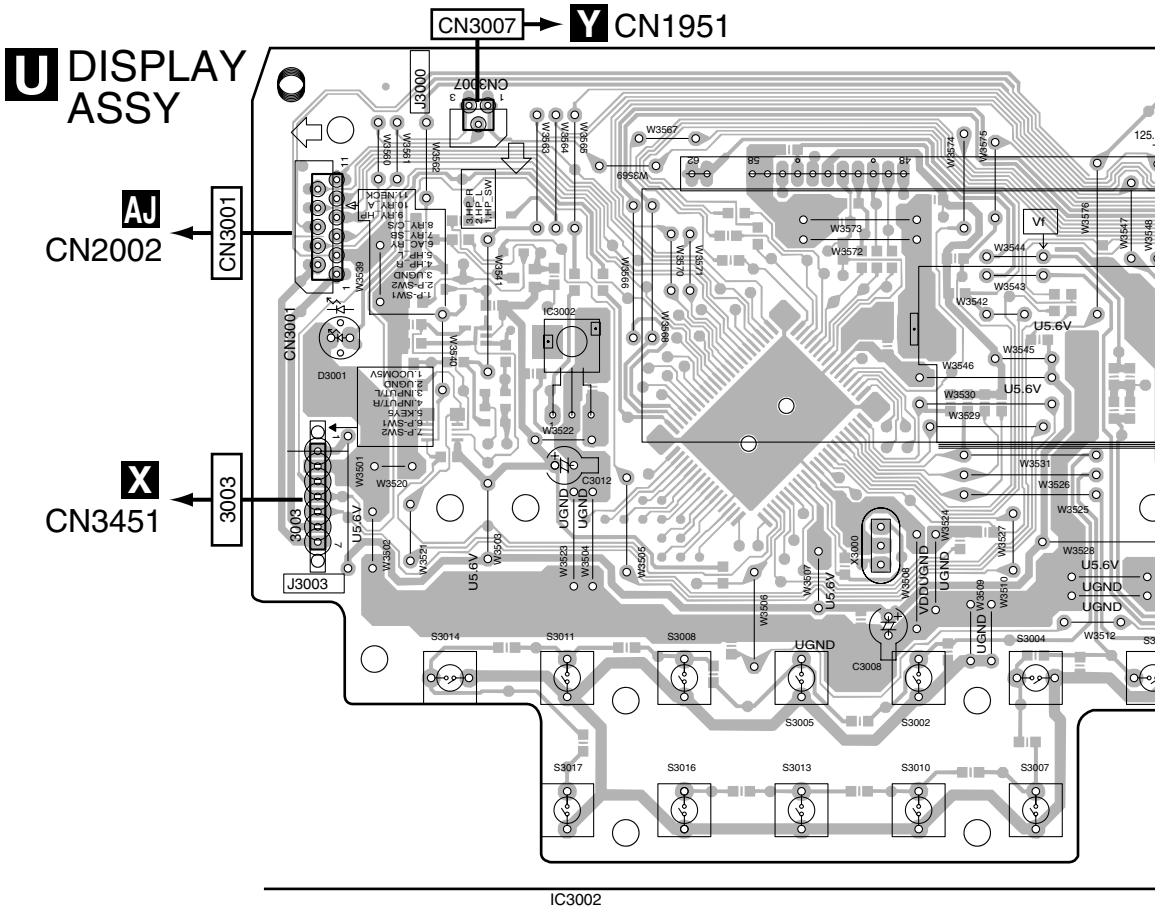
SIDE B



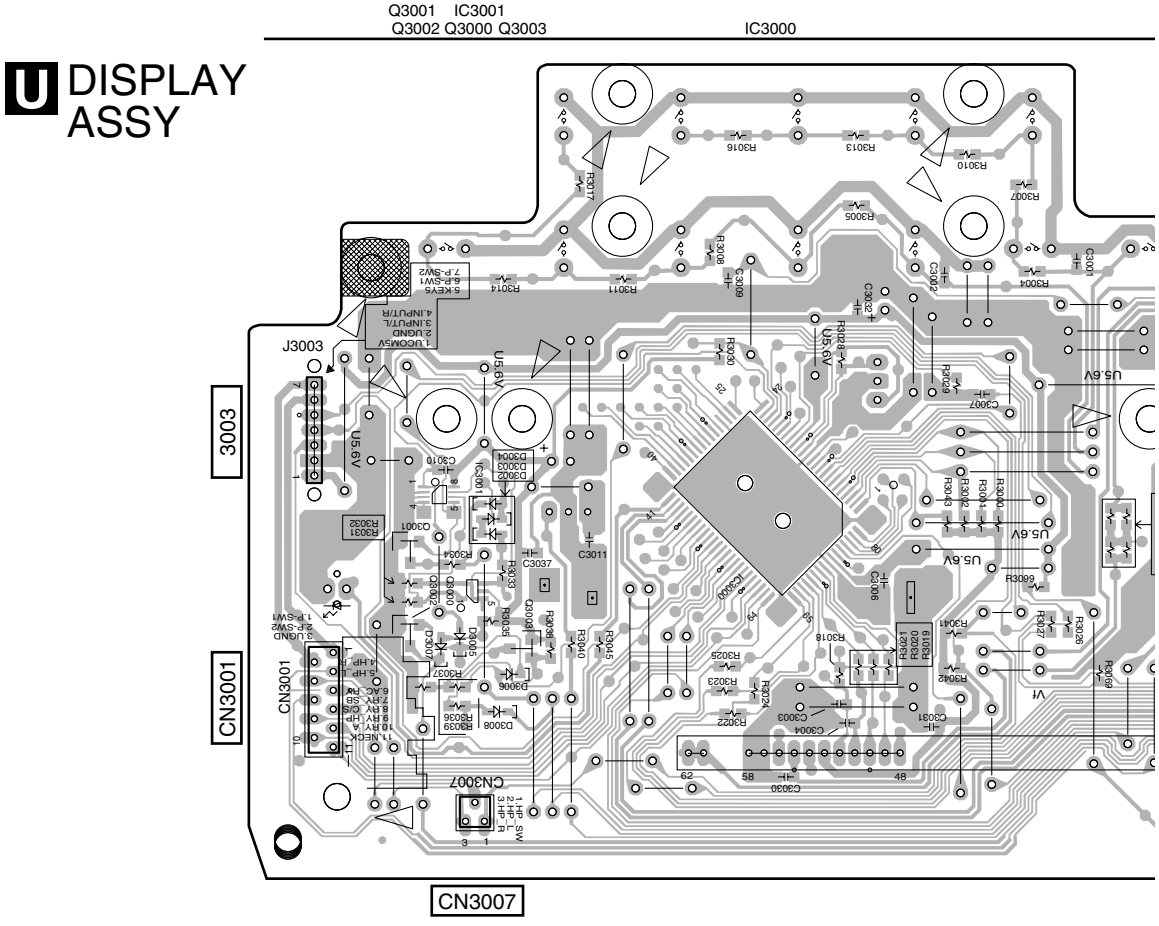

SIDE A
CN3004 → M CN1601
CN3005 → C CN1501
DISPLAY ASS'Y
V CN3401
N CN4752
L CN501
CN3006
3002
3008
J3002
J3008
(ANP7485-A)
SIDE B
Q3004
AWX
CN3004
CN3005
CN3006
U

• **For VSX-53TX**

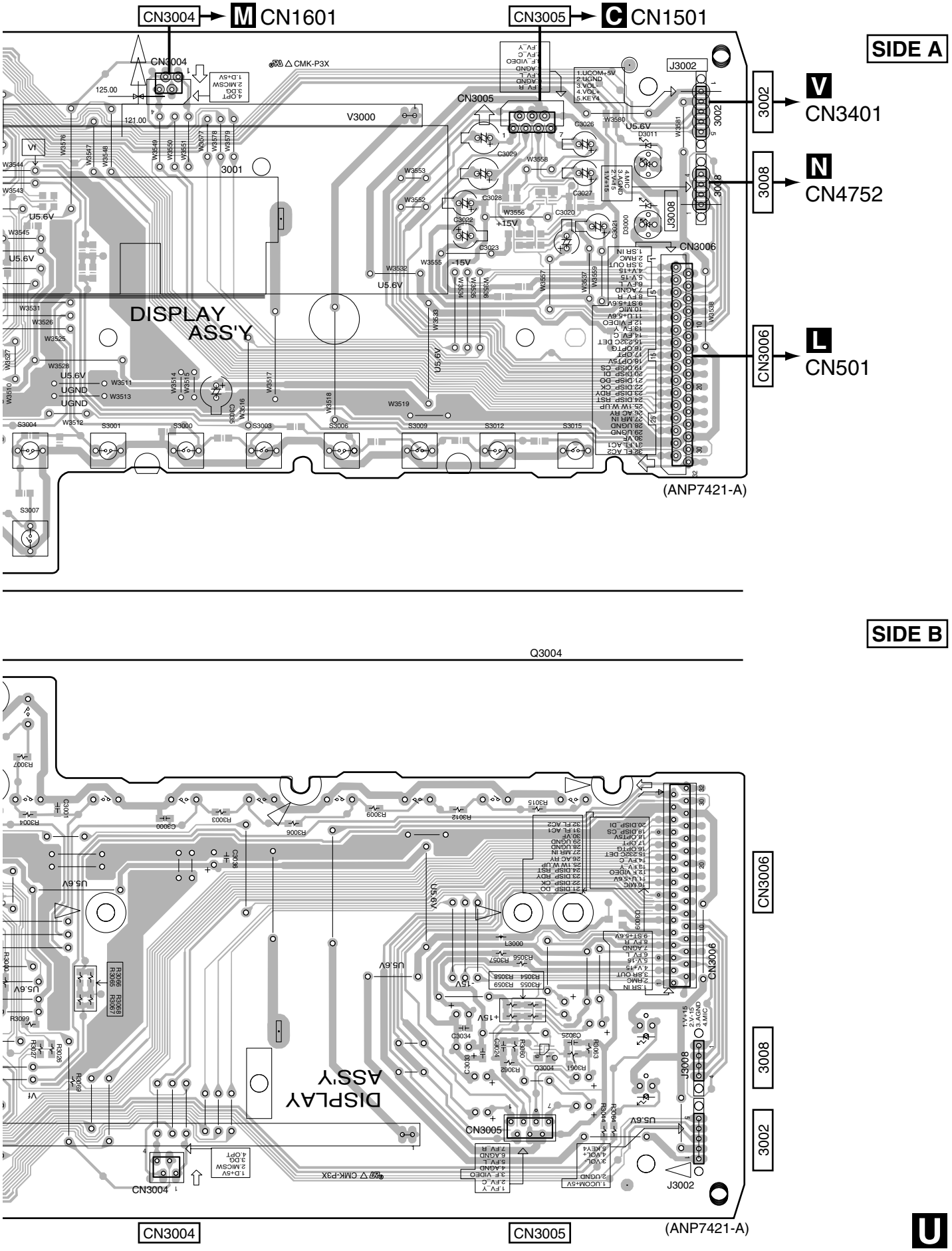
SIDE A



SIDE B



U

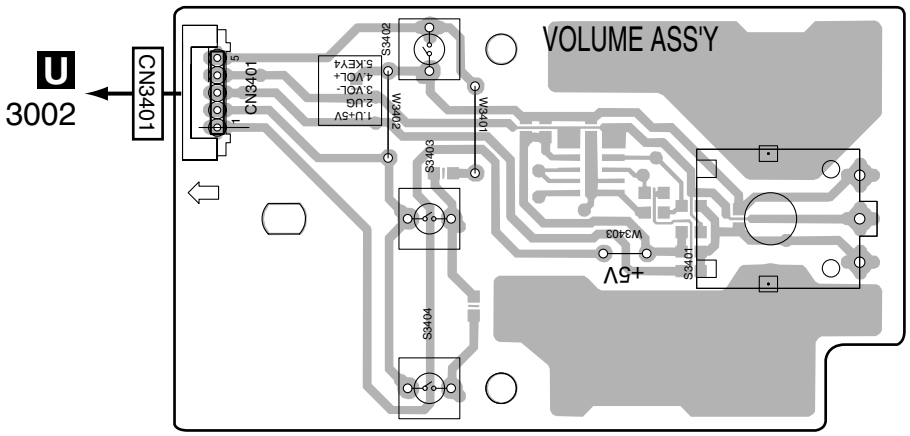

CN3004
M CN1601
CN3005
C CN1501
SIDE A
V
CN3401
N
CN4752
L
CN501
CN3006
3002
3008
DISPLAY
ASS'Y
(ANP7421-A)
SIDE B
Q3004
CN3004
CN3005
(ANP7421-A)
U

4.15 VOLUME, MULTI JOG and HEADPHONE ASSYS

SIDE A

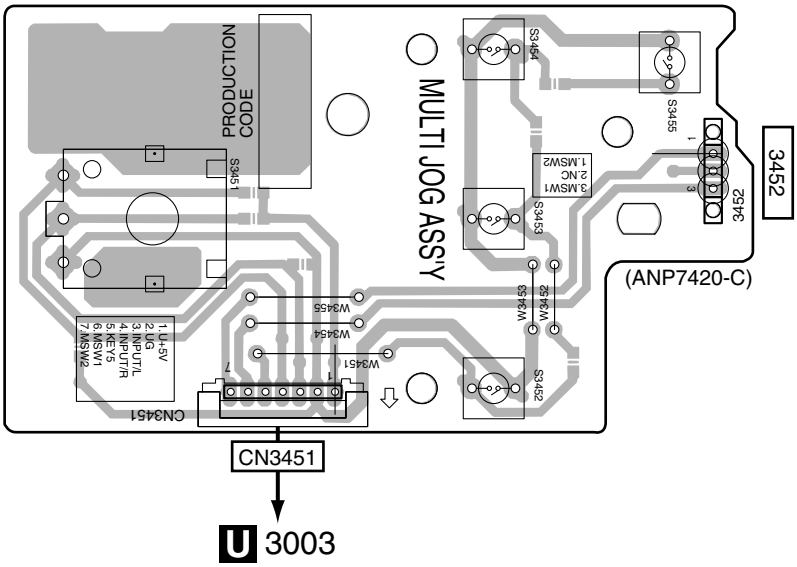
SIDE A

V VOLUME ASSY



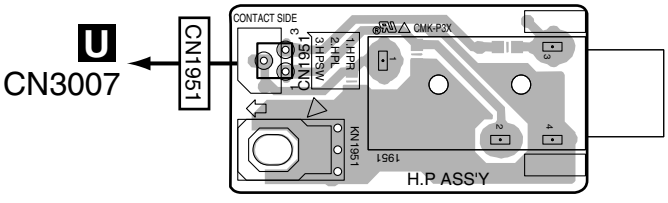
(ANP7420-C)

X MULTI JOG ASSY



(ANP7420-C)

Y HEADPHONE ASSY

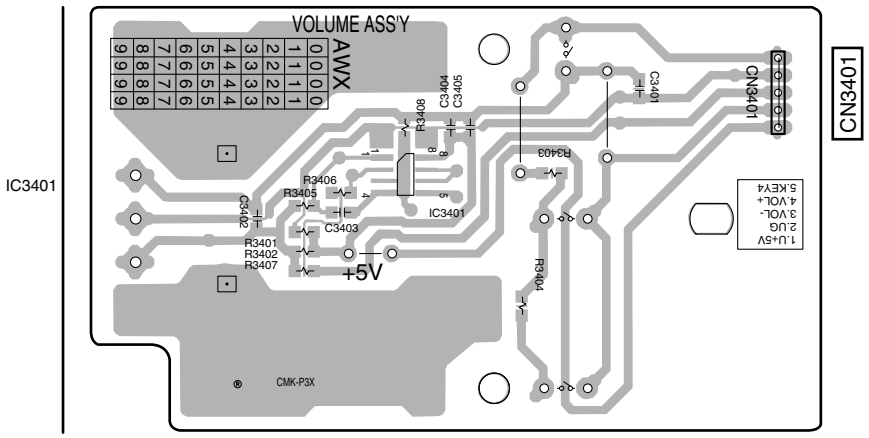


(ANP7420-C)

SIDE B

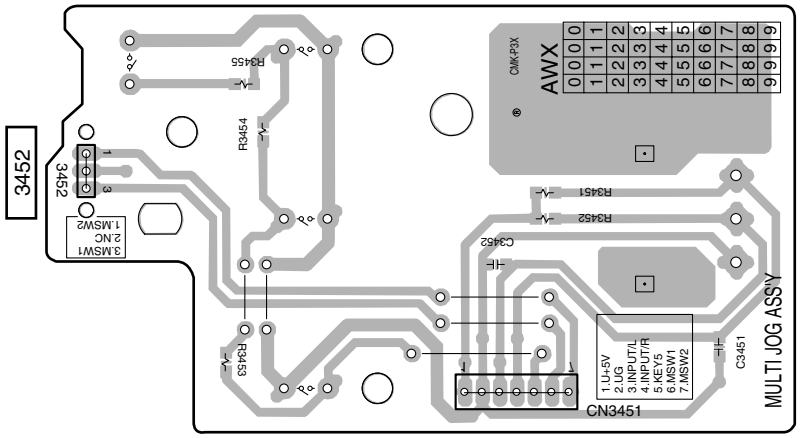
SIDE B

V VOLUME ASSY



(ANP7420-C)

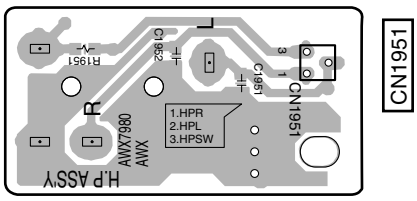
X MULTI JOG ASSY



CN3451

(ANP7420-C)

Y HEADPHONE ASSY



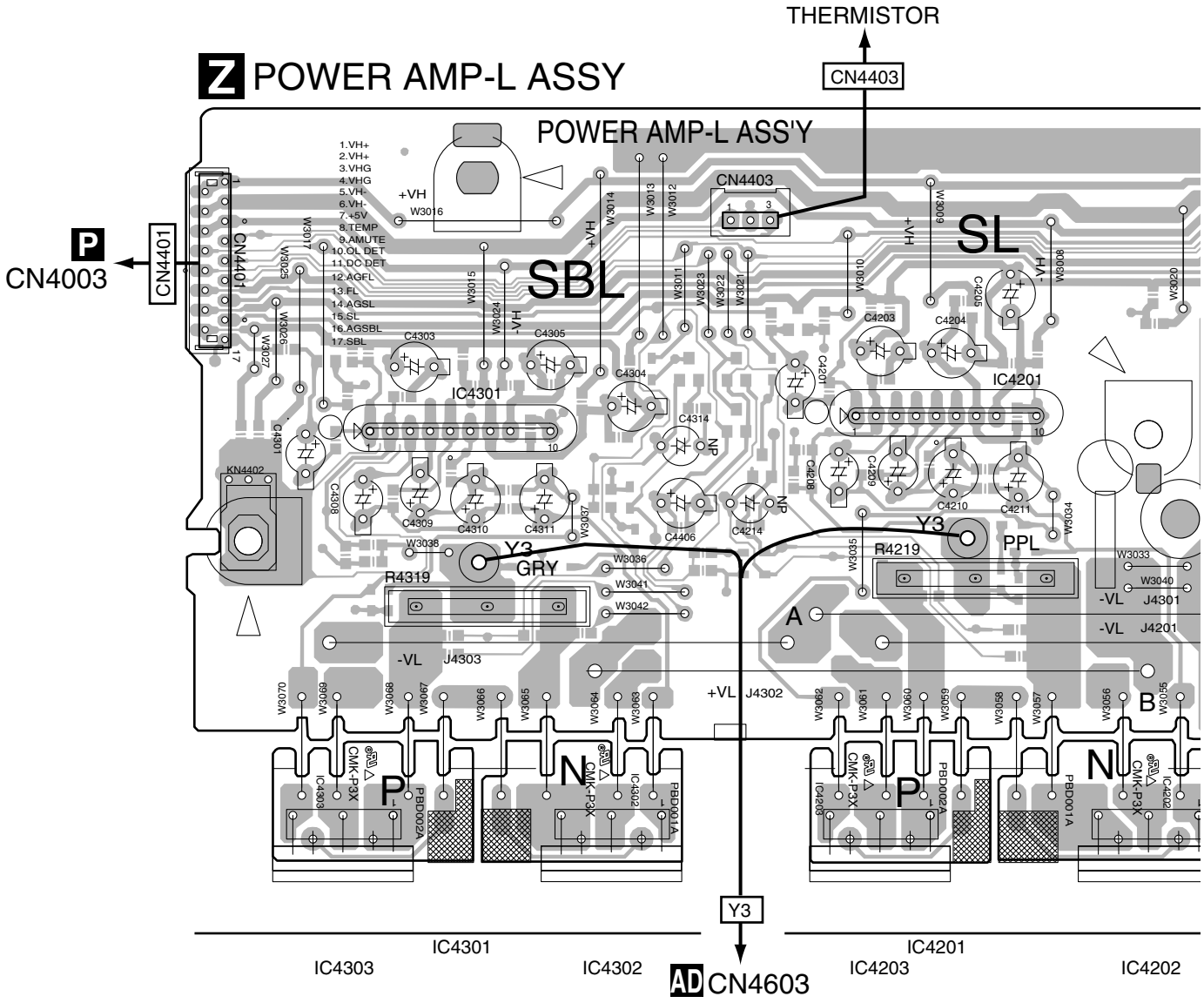
CN1951

(ANP7420-C)

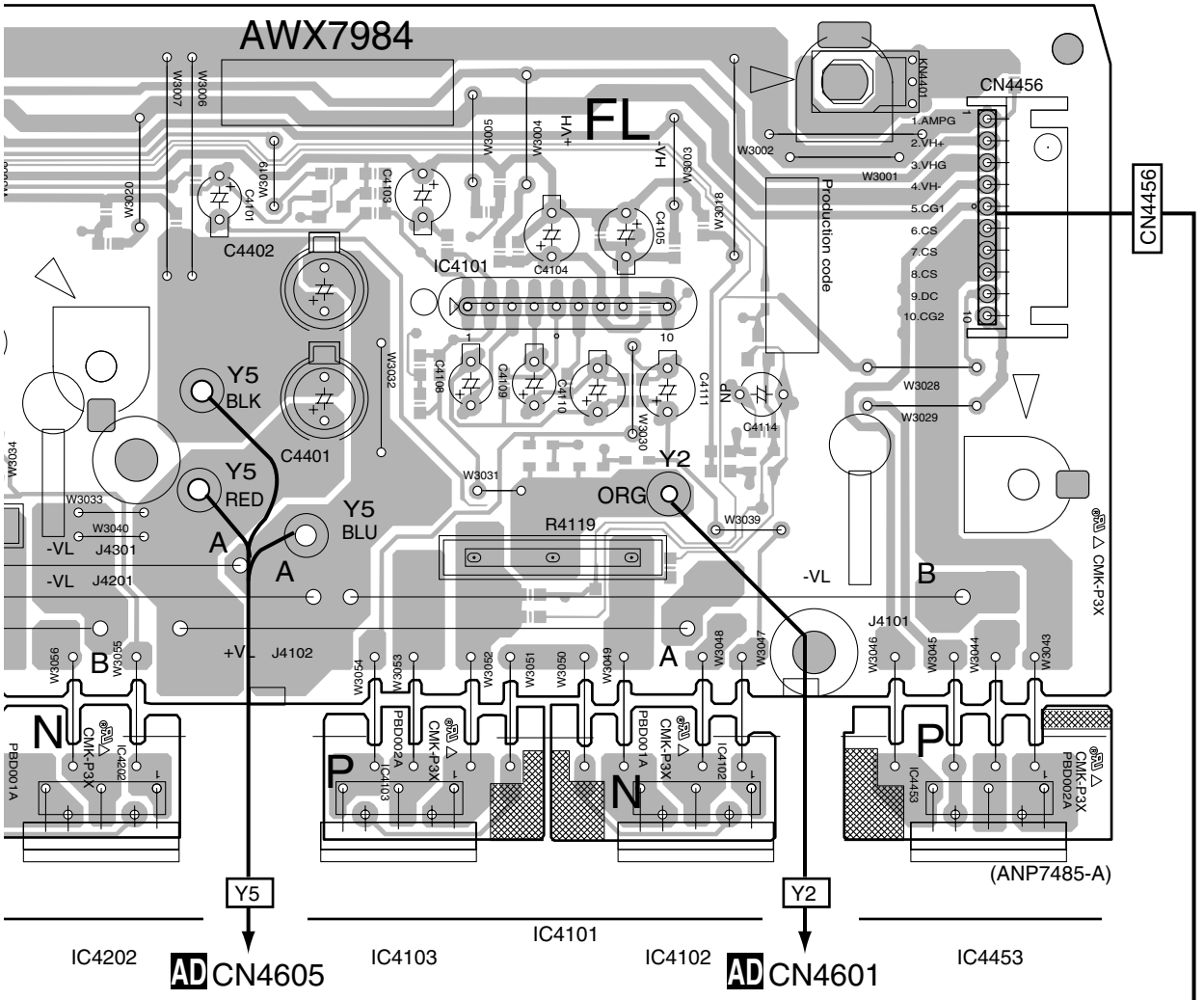
4.16 POWER AMP L and POWER AMP C ASSYS

SIDE A

• For VSX-55TXi

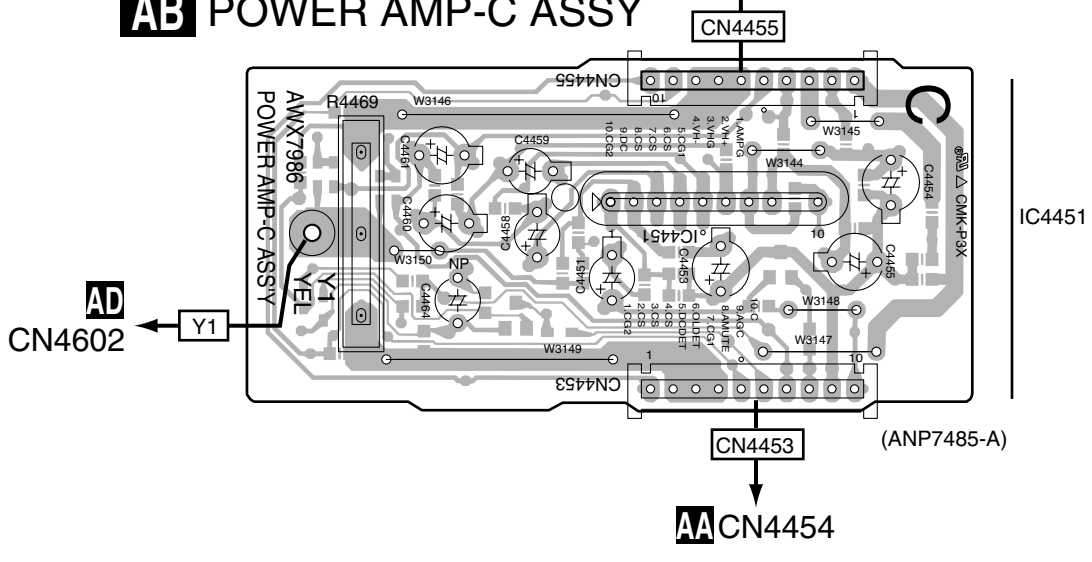


SIDE A



IC4101

AB POWER AMP-C ASSY

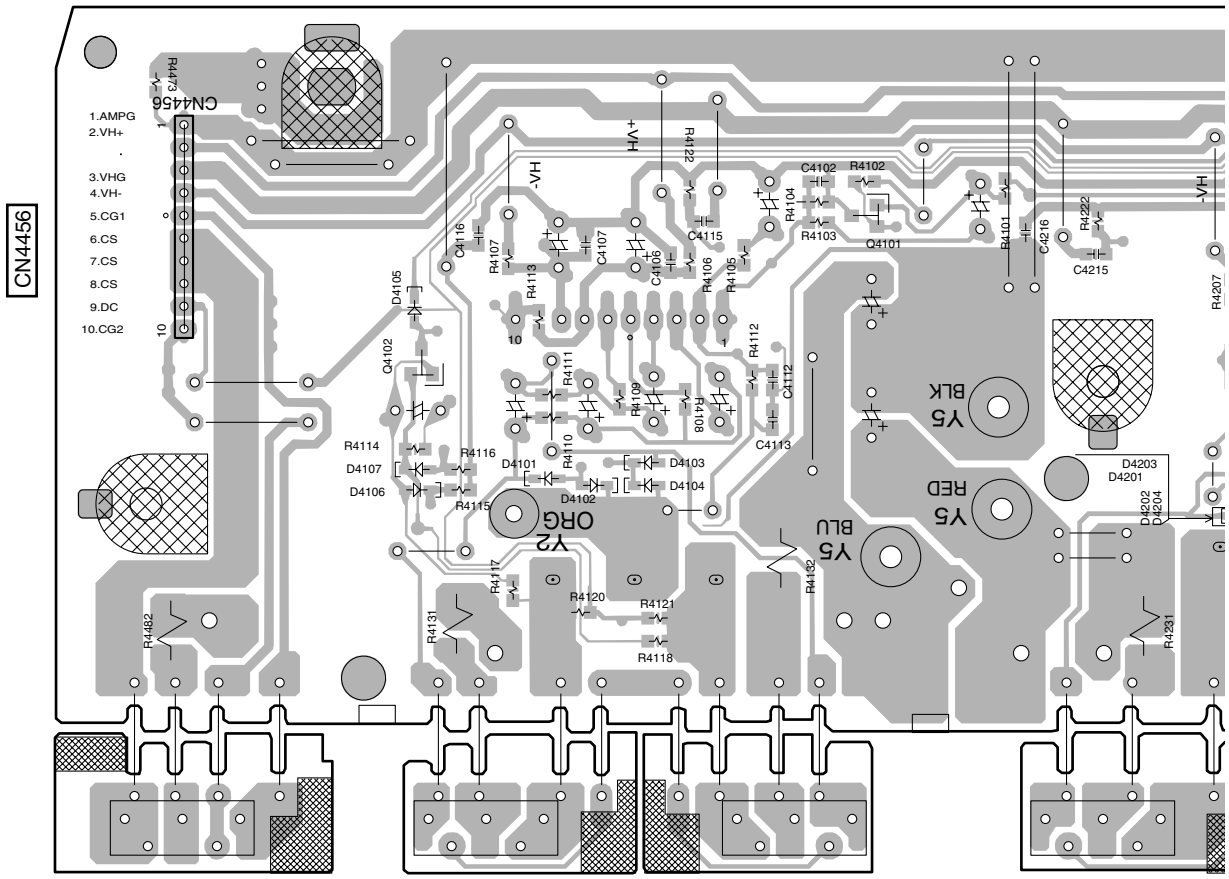


Z AB

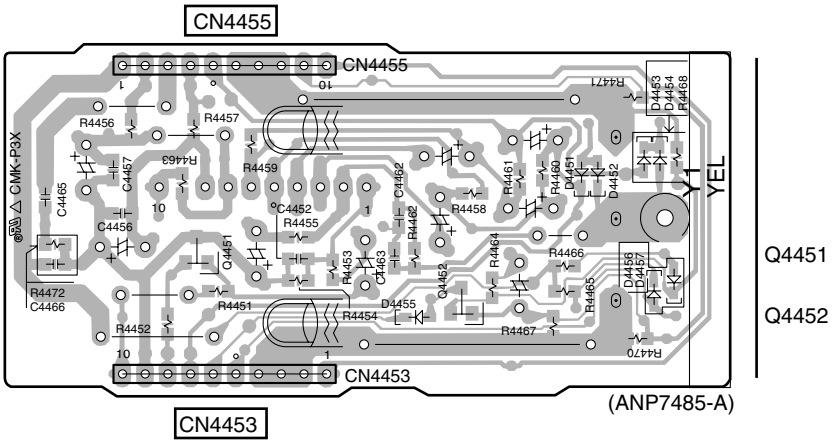
SIDE B

• For VSX-55TXi

Z POWER AMP-L ASSY

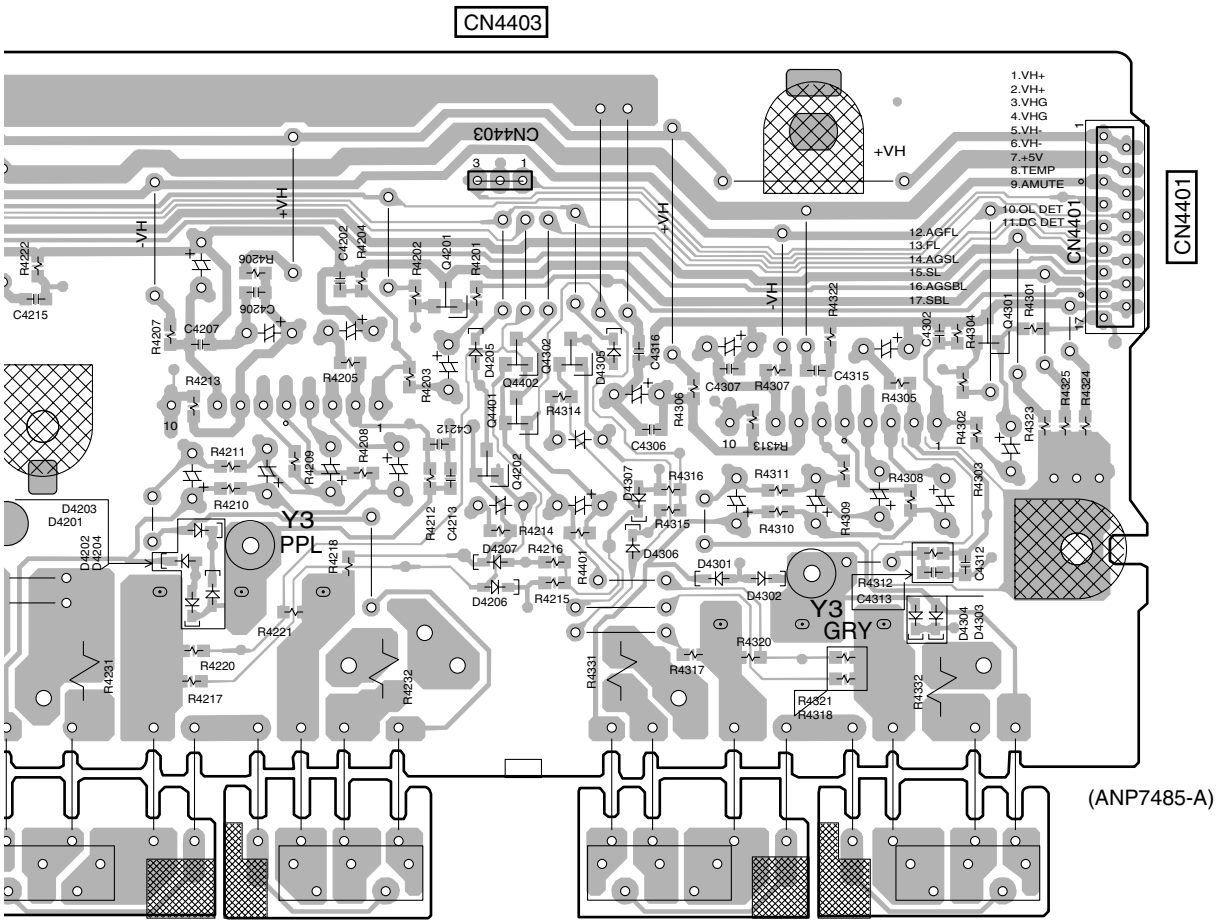


AB POWER AMP-C ASSY



Z AB

SIDE B

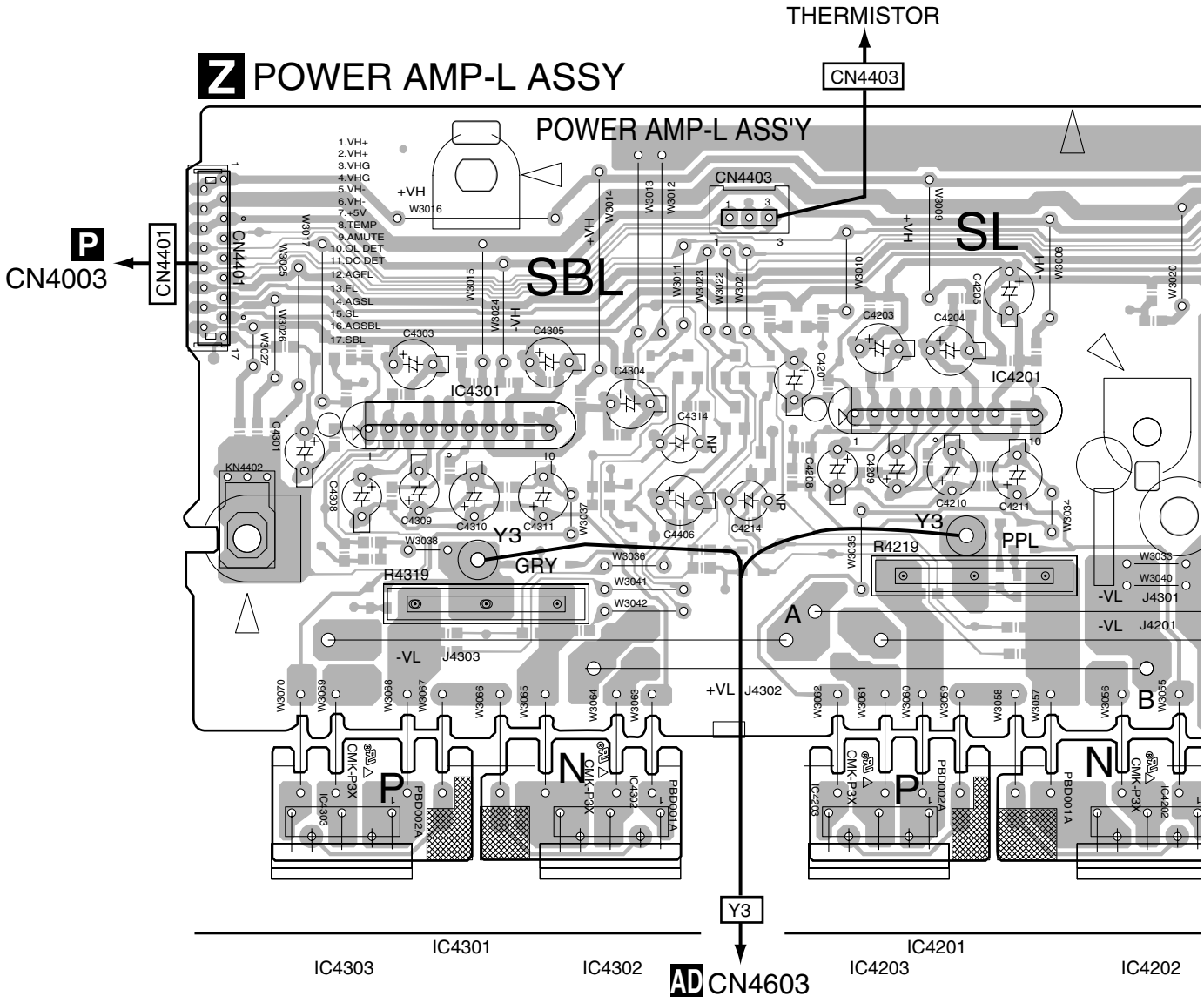


Q4201 Q4402 Q4302
Q4401
Q4202

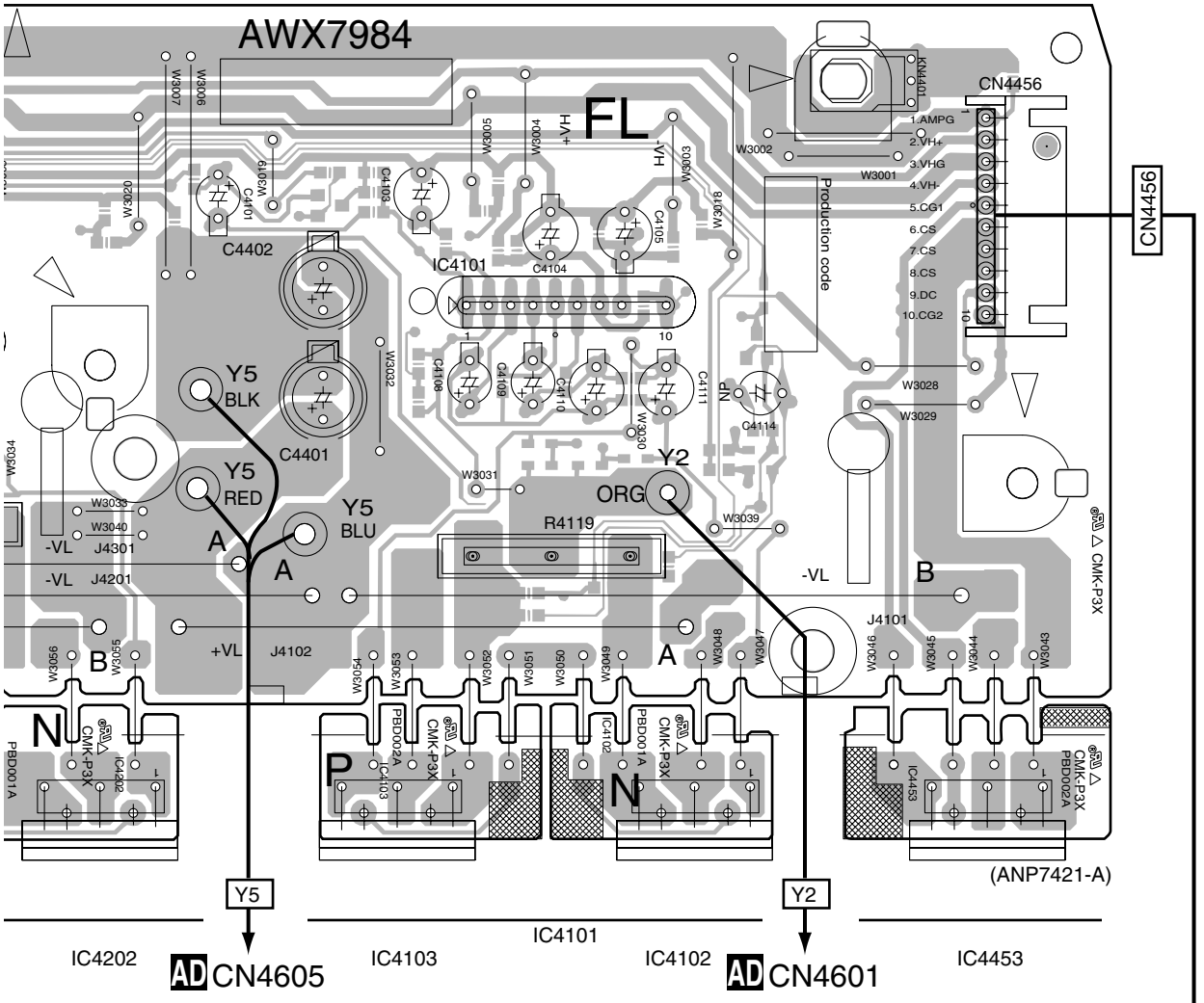
Q4301

SIDE A

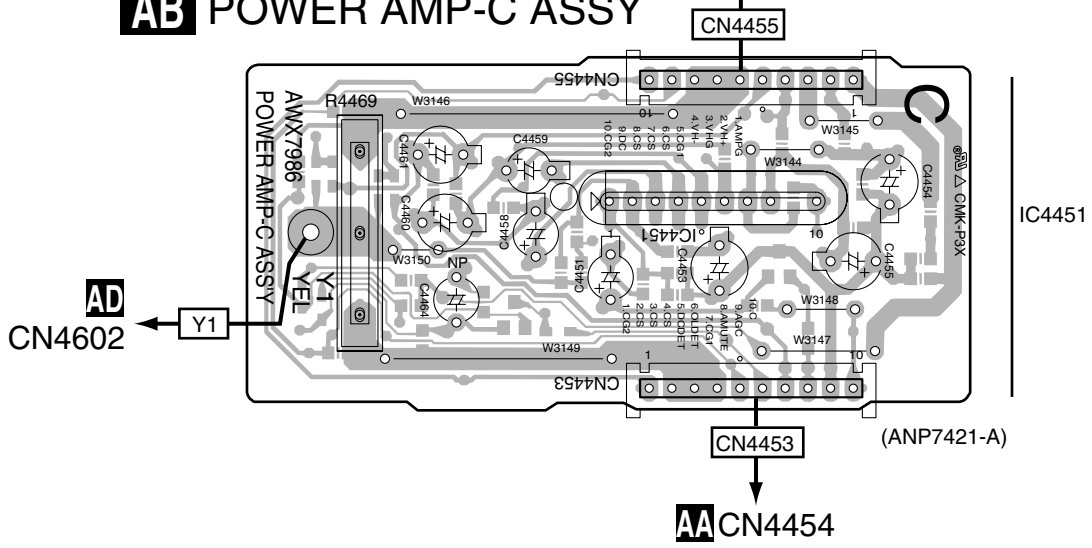
• For VSX-53TX



SIDE A



AB POWER AMP-C ASSY

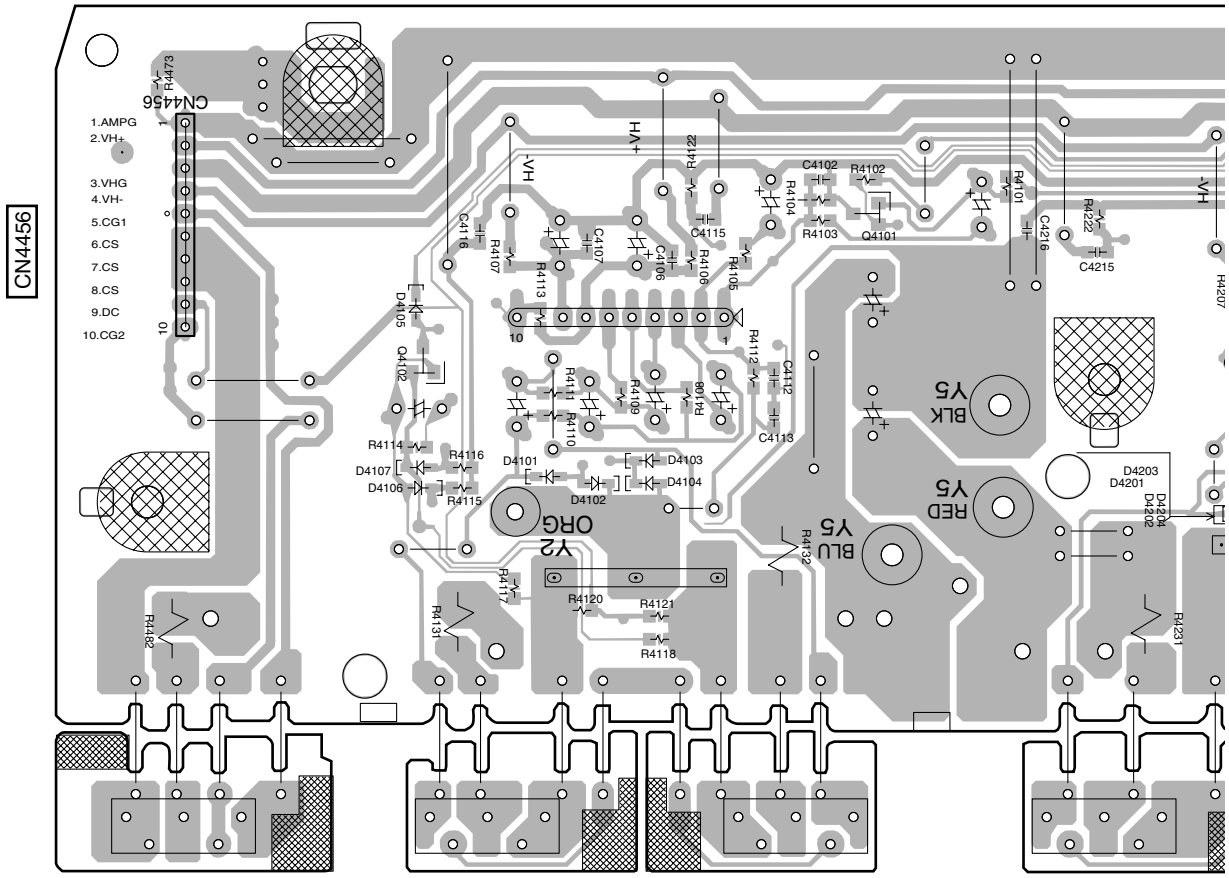


Z **AB**

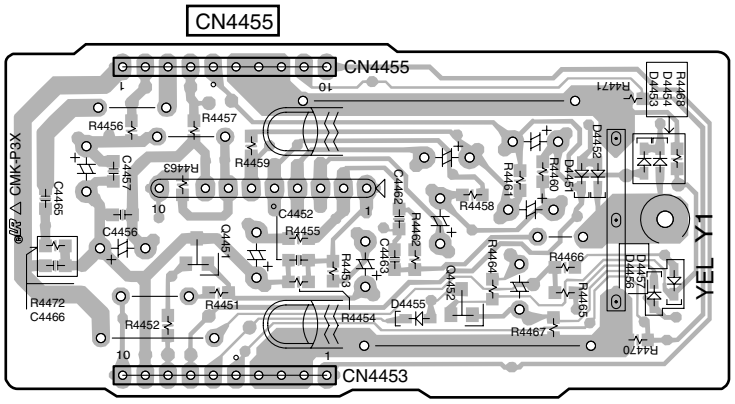
SIDE B

• For VSX-53TX

Z POWER AMP-L ASSY

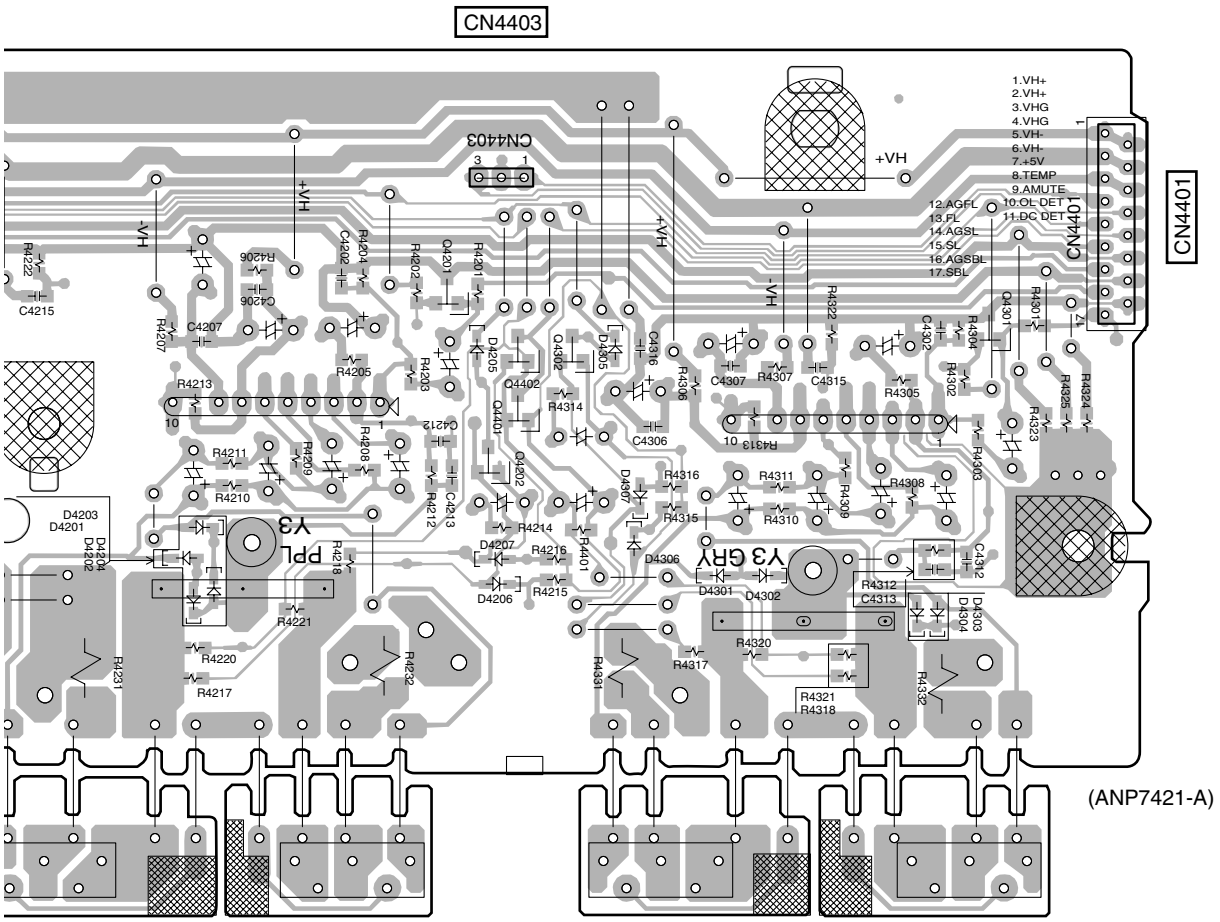


AB POWER AMP-C ASSY



Z AB

SIDE B



Q4201 Q4402 Q4302
Q4401
Q4202

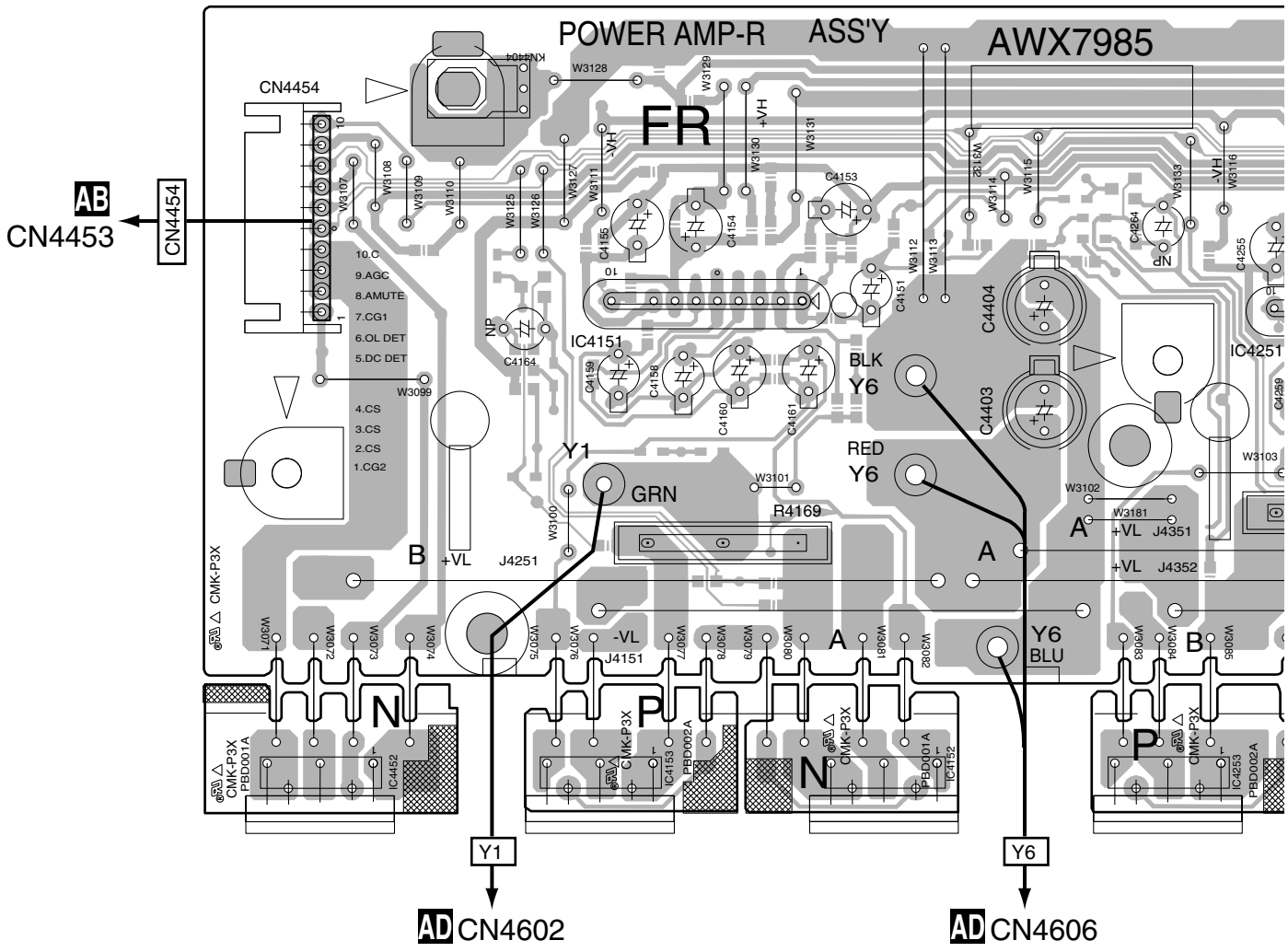
Q4301

4.17 POWER AMP R ASSY

SIDE A

• For VSX-55TXi

AA POWER AMP-R ASSY

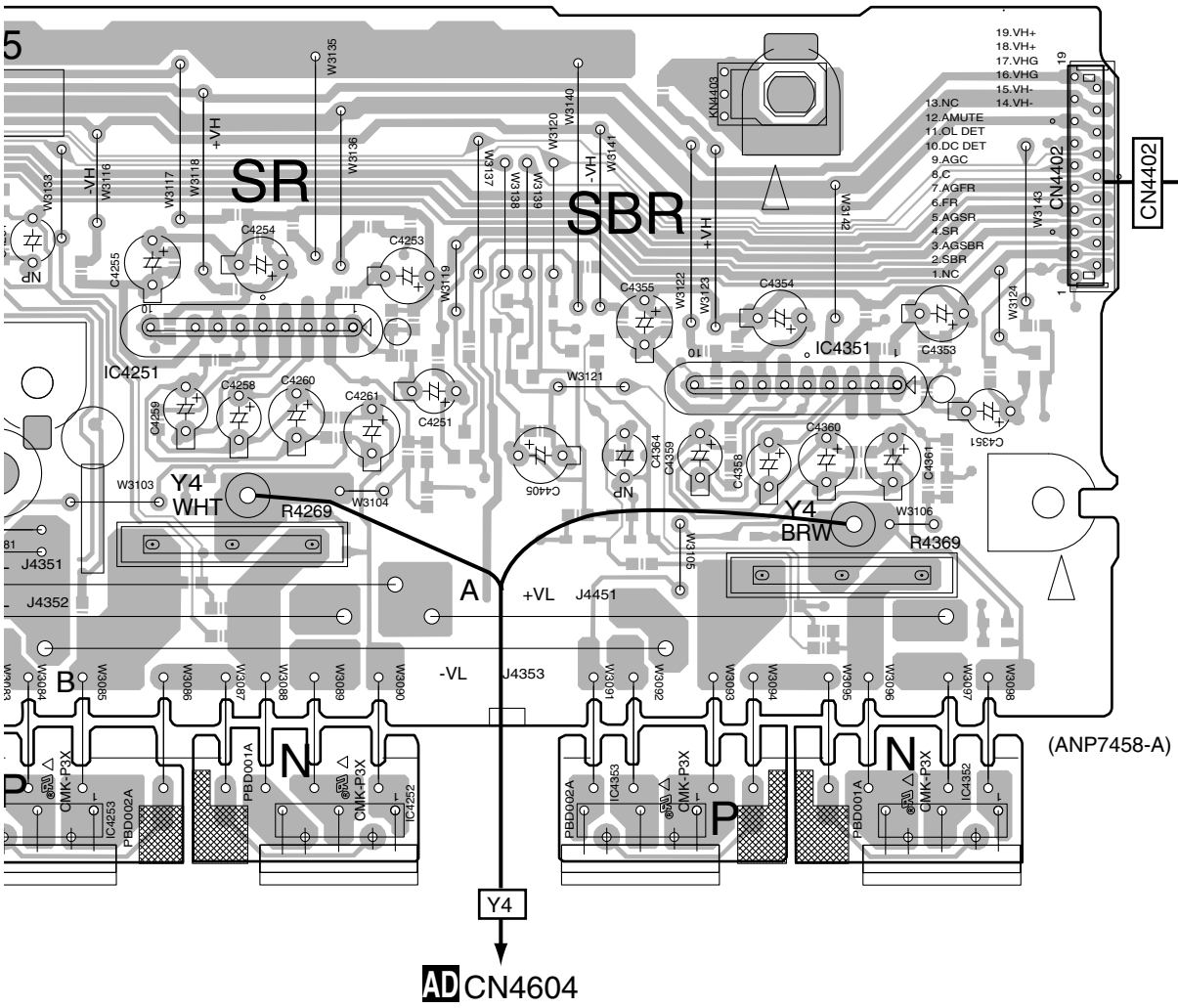


IC4151

IC4452 IC4153 IC4152 IC4253

AA

SIDE A



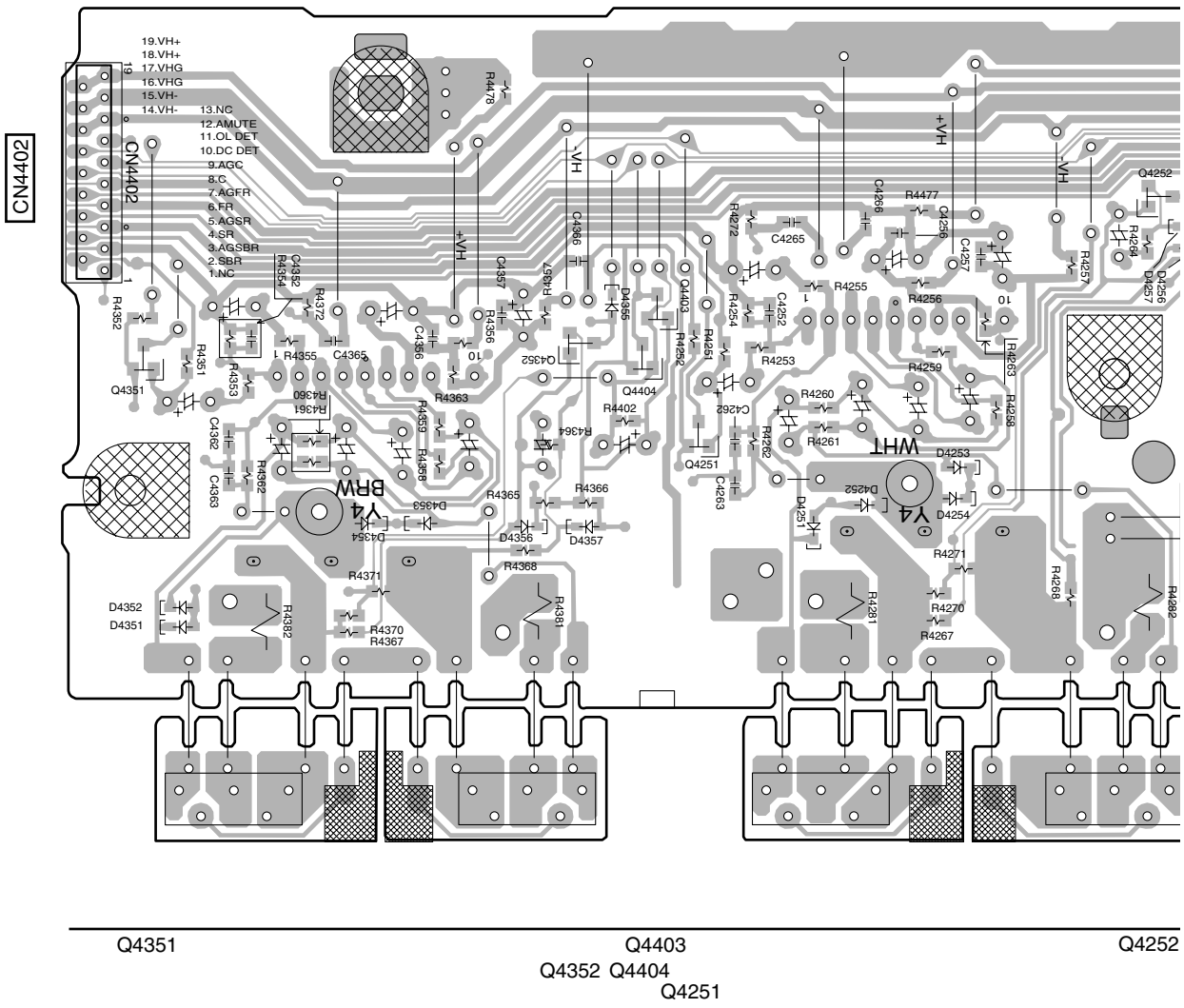
IC4251 IC4351

IC4253 IC4252 IC4353 IC4352

SIDE B

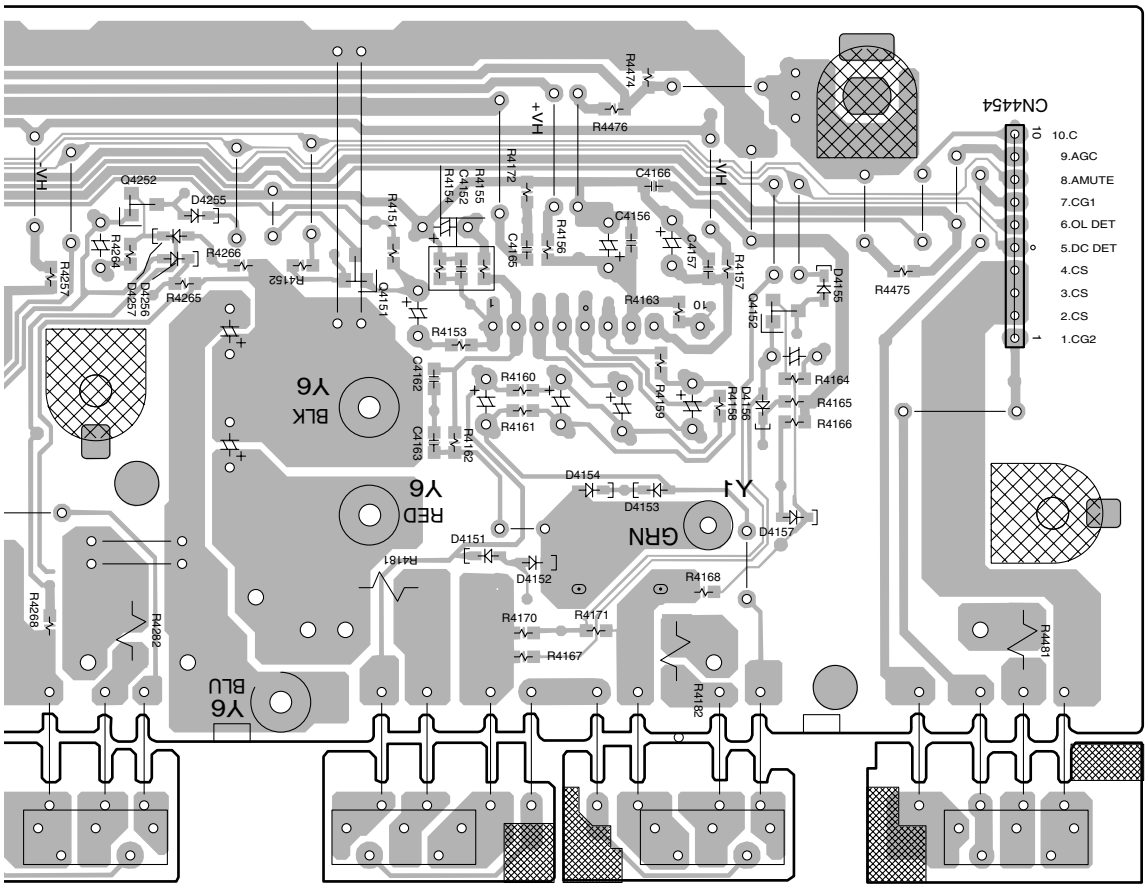
• For VSX-55TXi

AA POWER AMP-R ASSY



AA

SIDE B

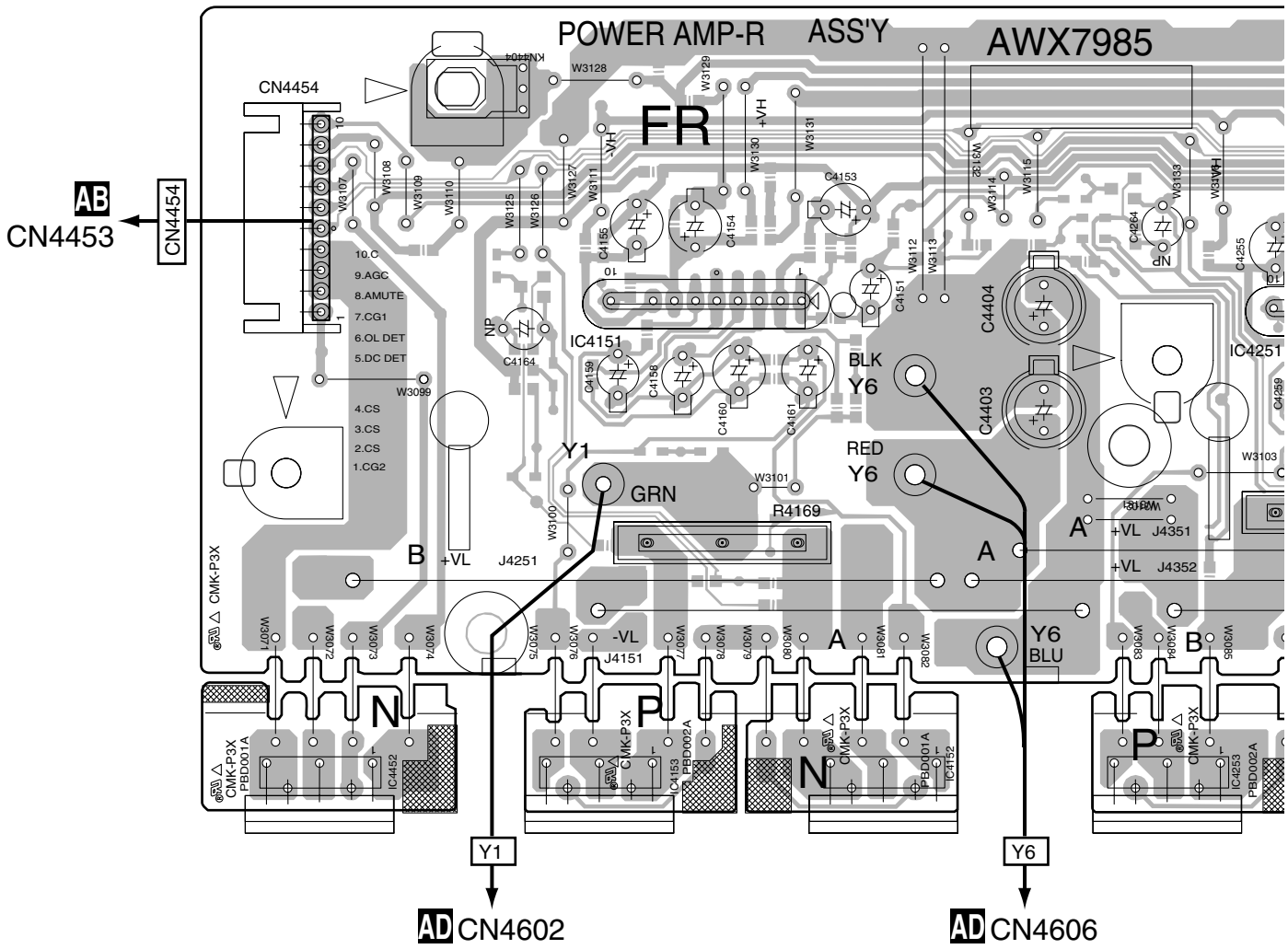


(ANP7485-A)

SIDE A

• For VSX-53TX

AA POWER AMP-R ASSY

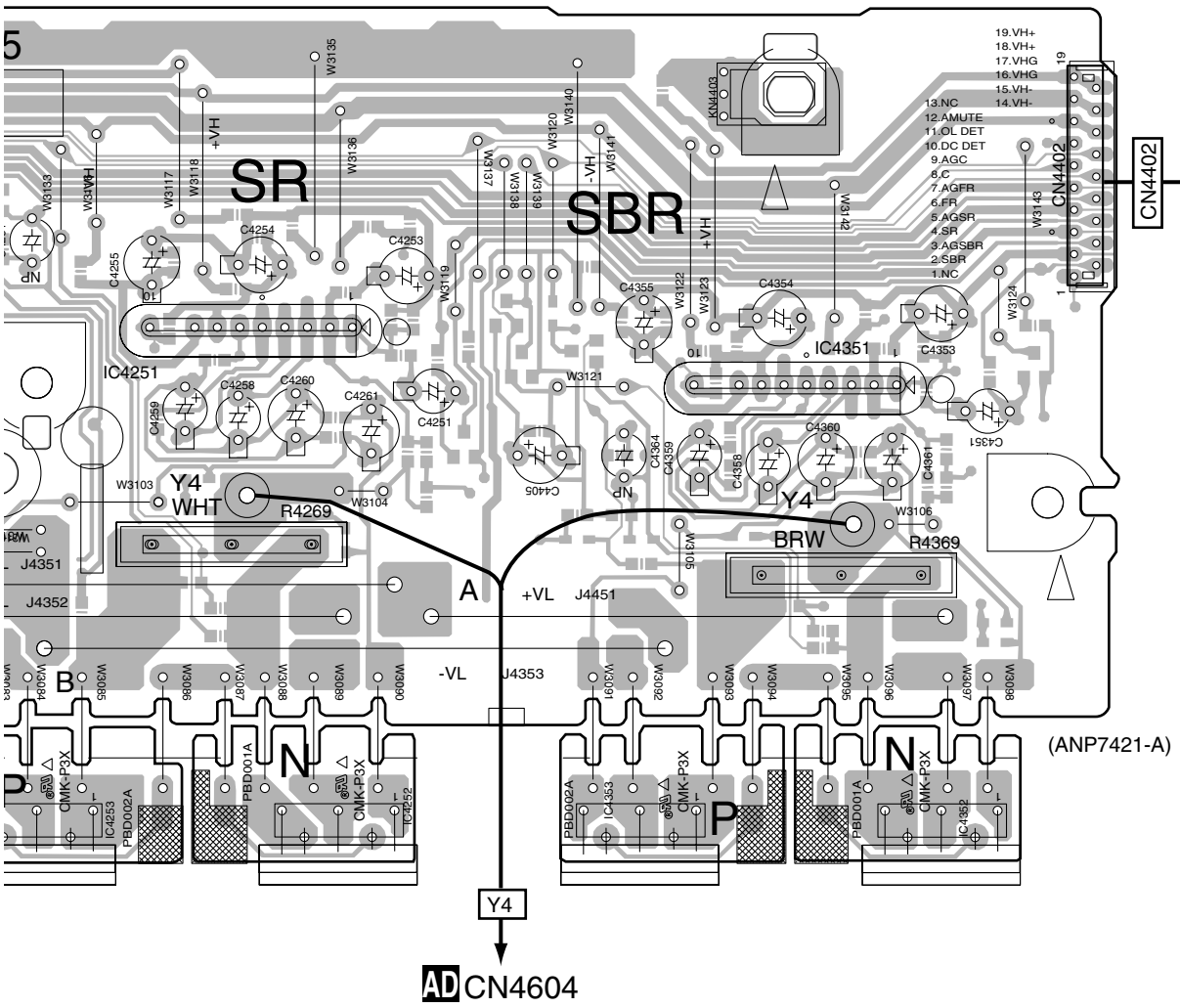


IC4151

IC4452 IC4153 IC4152 IC4253

AA

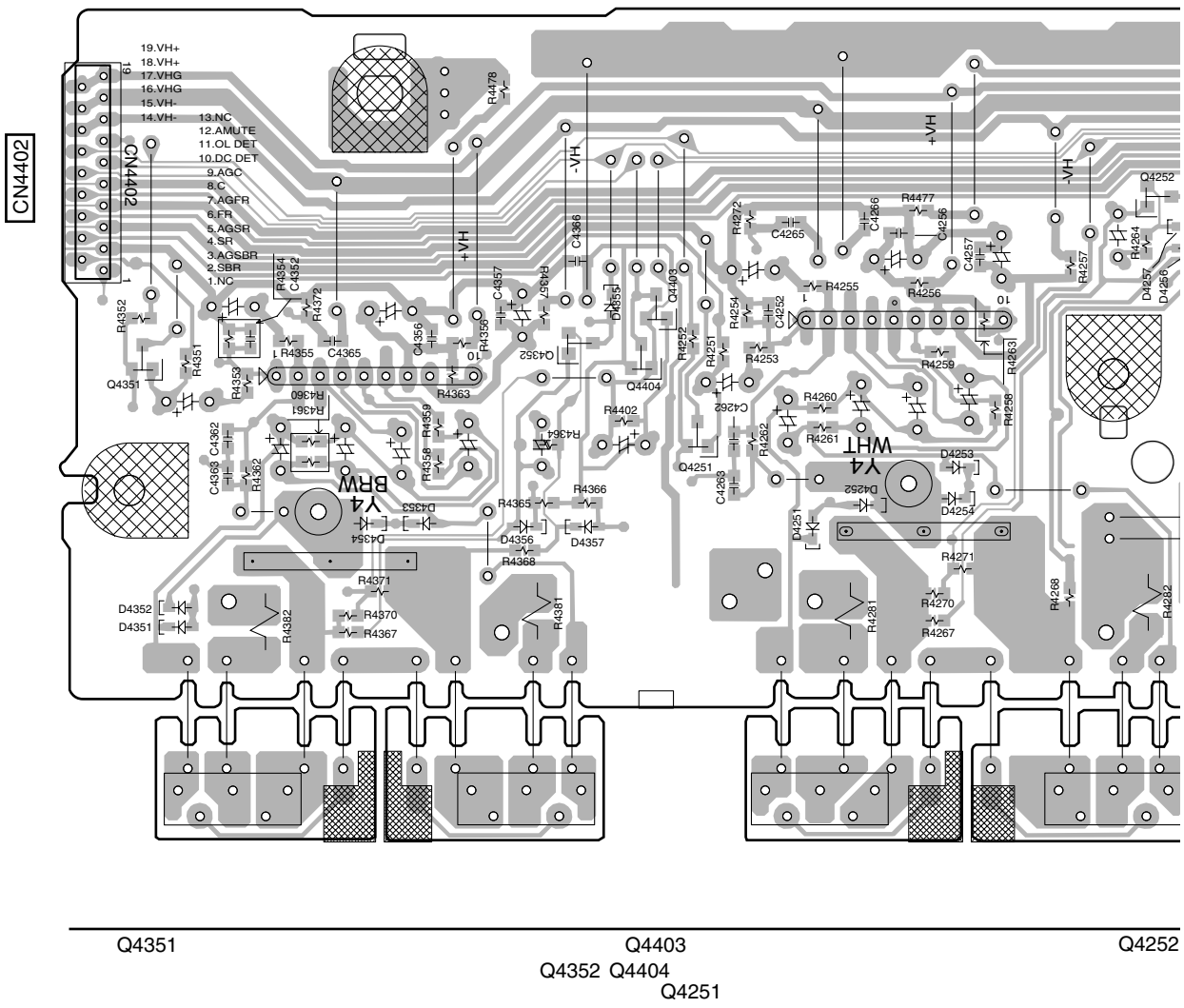
SIDE A


SR
SBR
IC4251
IC4351
J4351
J4352
J4451
J4353
A
B
+VL
-VL
Y4
WHT
R4269
BRW
R4369
W3103
W3104
W3106
W3105
CN4402
19.VH+
18.VH+
17.VHG
16.VHG
15.VH-
14.VH-
13.NC
12.AMUTE
11.OL DET
10.DC DET
9.AGC
8.C
7.AGFR
6.FR
5.AGSR
4.SR
3.AGSBR
2.SBR
1.NC
P
CN4002
(ANP7421-A)
Y4
AD CN4604
IC4253
IC4252
IC4353
IC4352

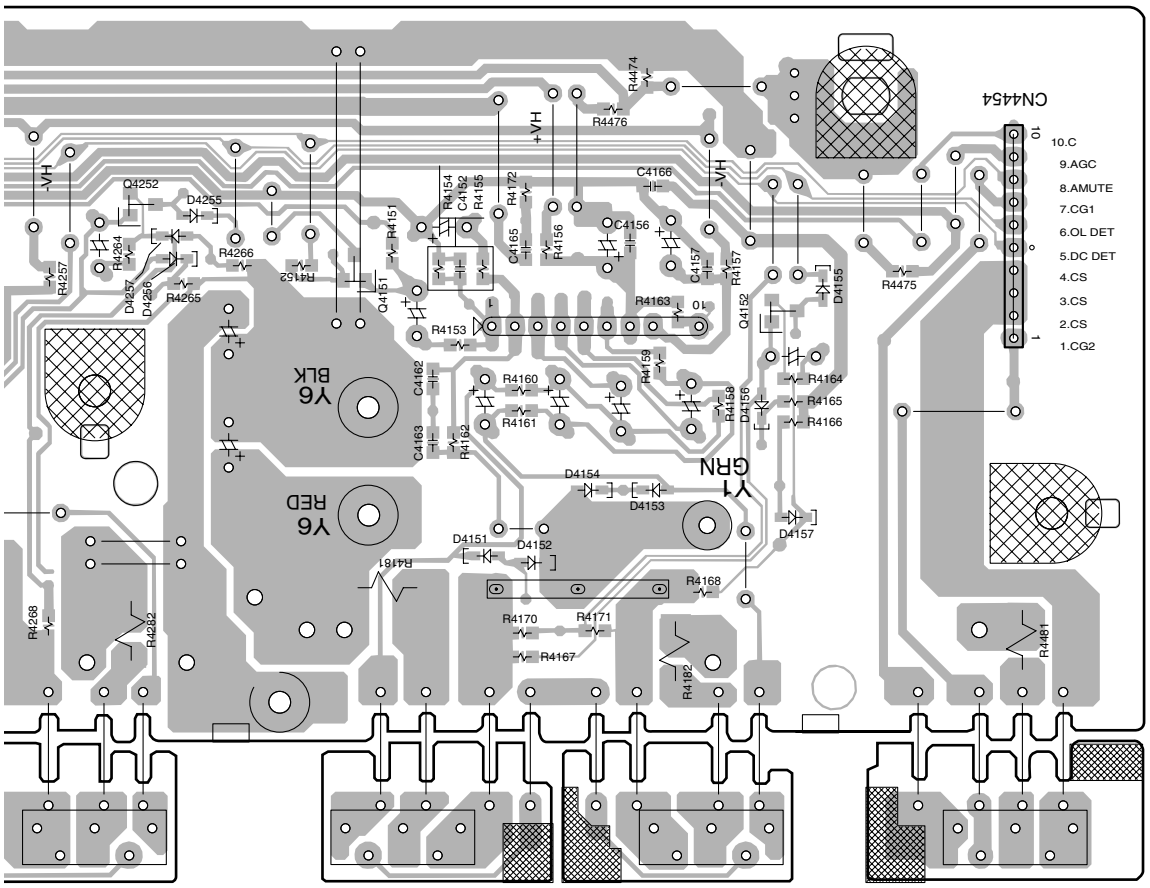
SIDE B

• For VSX-53TX

AA POWER AMP-R ASSY



SIDE B



CN4454

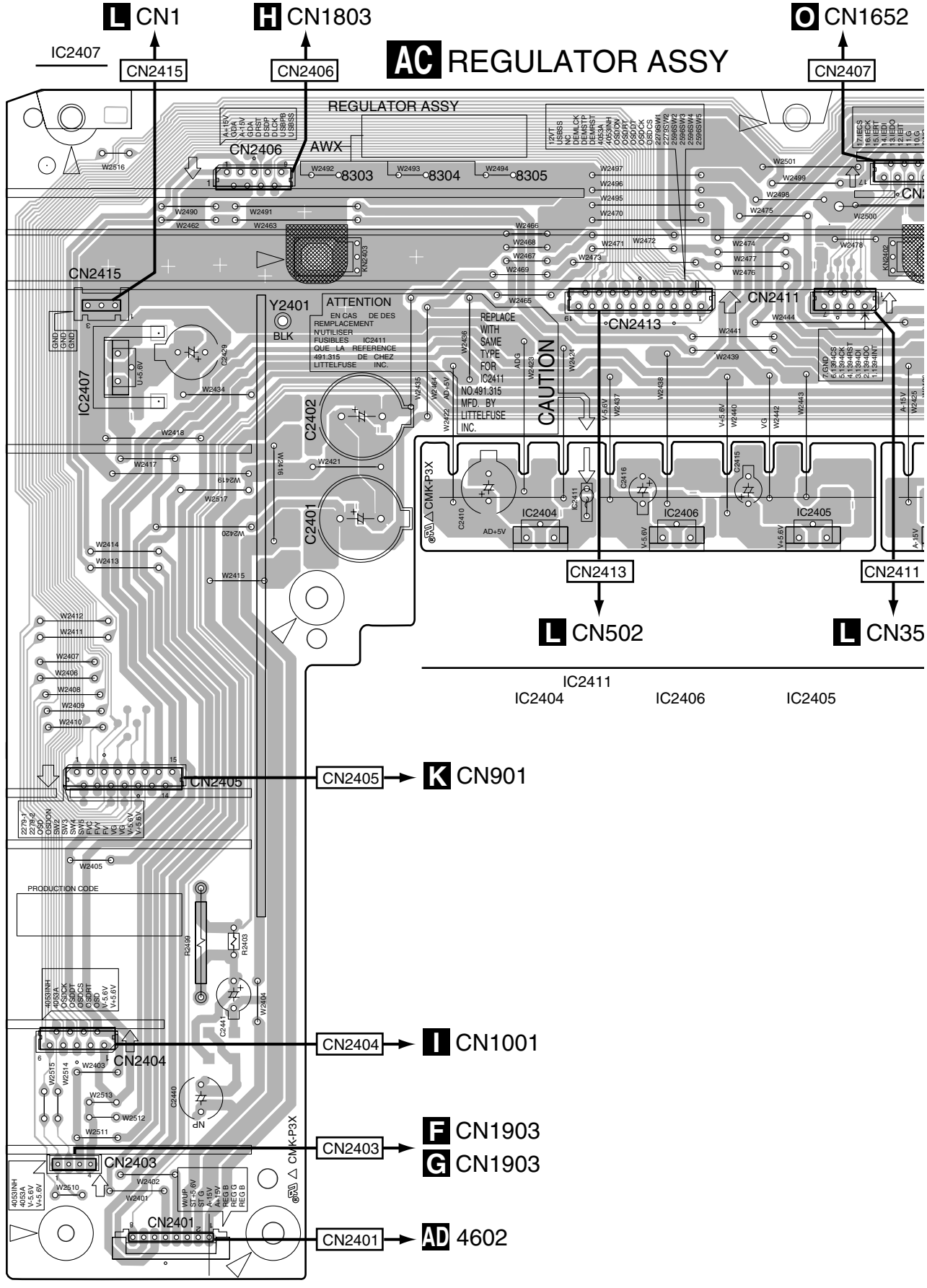
(ANP7421-A)

Q4252 Q4151 Q4152

4.18 REGULATOR ASSY

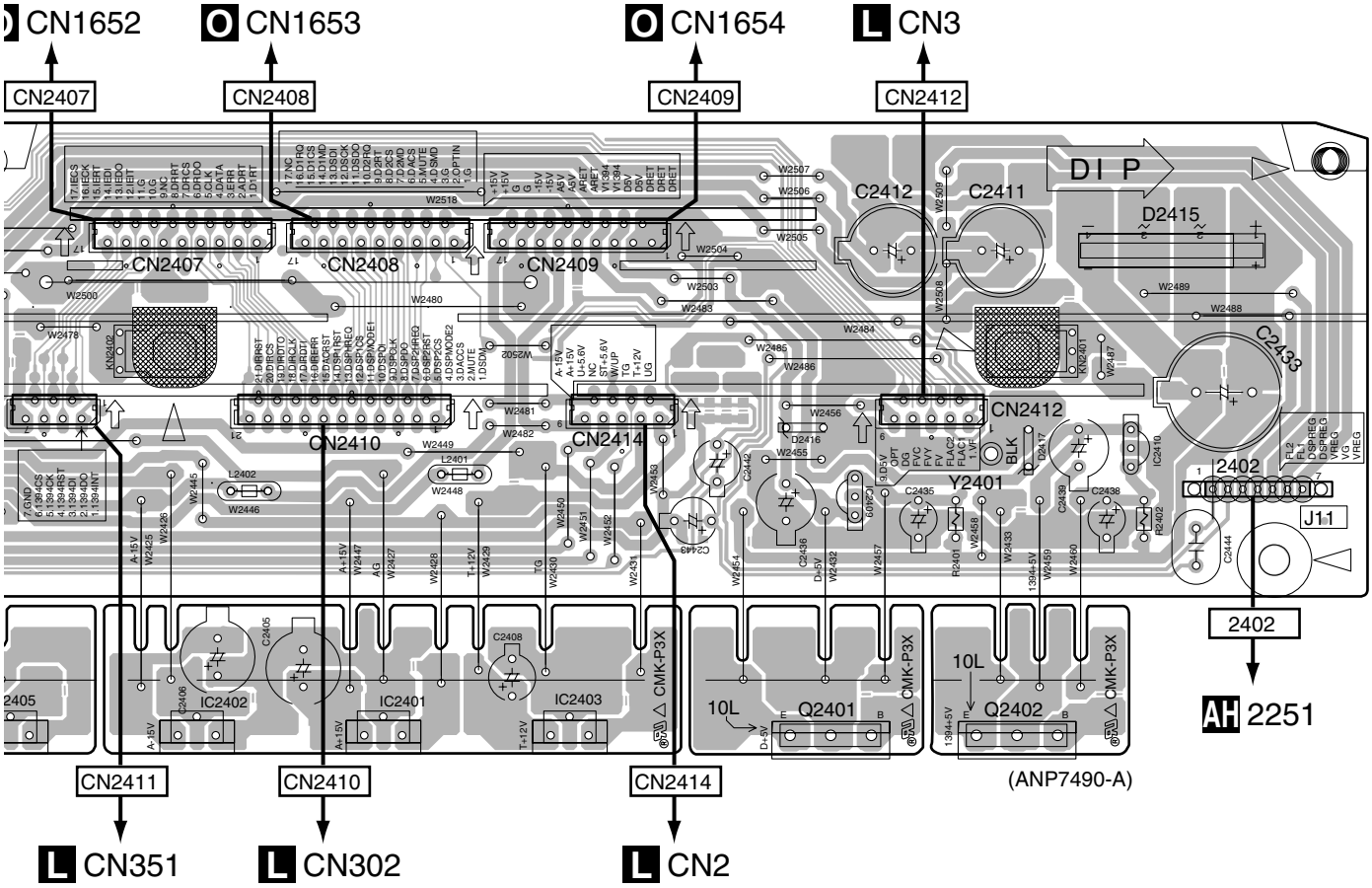
SIDE A

• For VSX-55TXi



AC

SIDE A



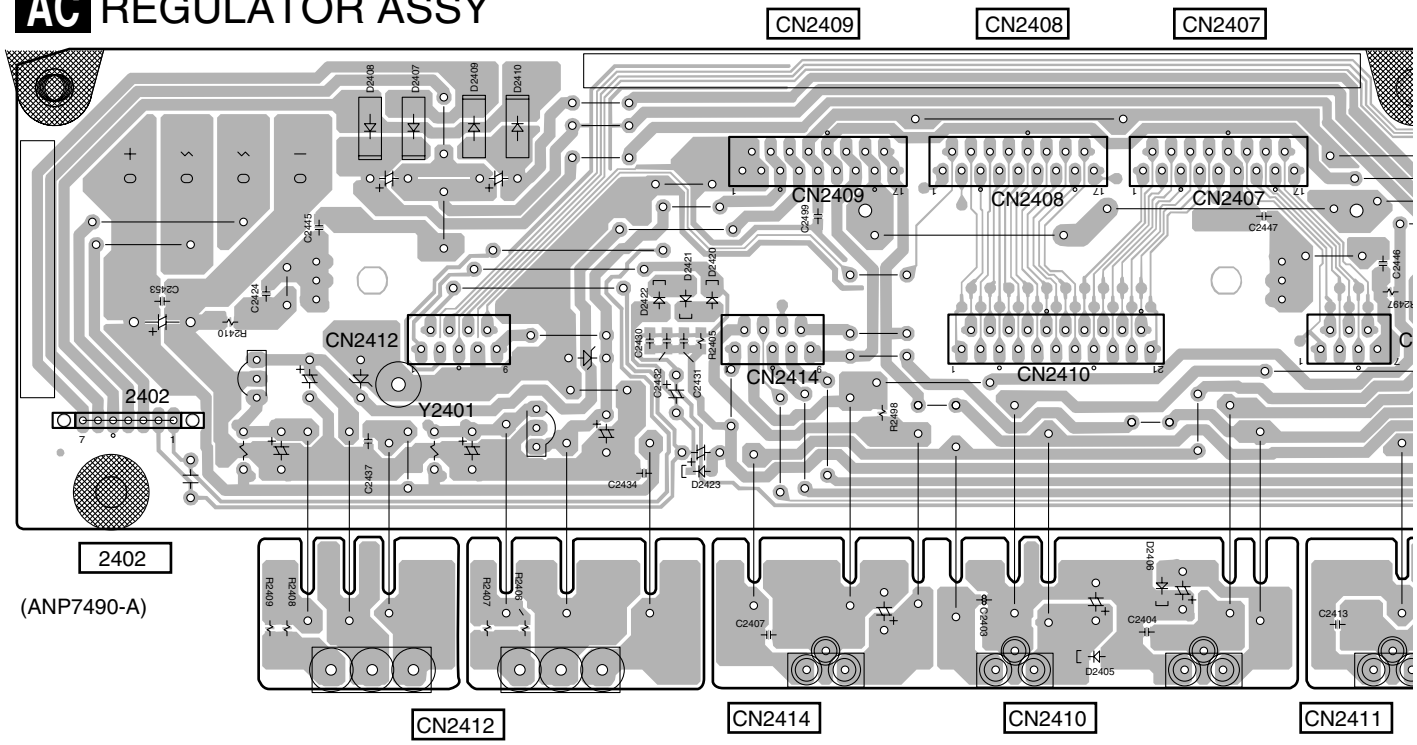
IC2409 IC2410

2405 IC2402 IC2401 IC2403 Q2401 Q2402

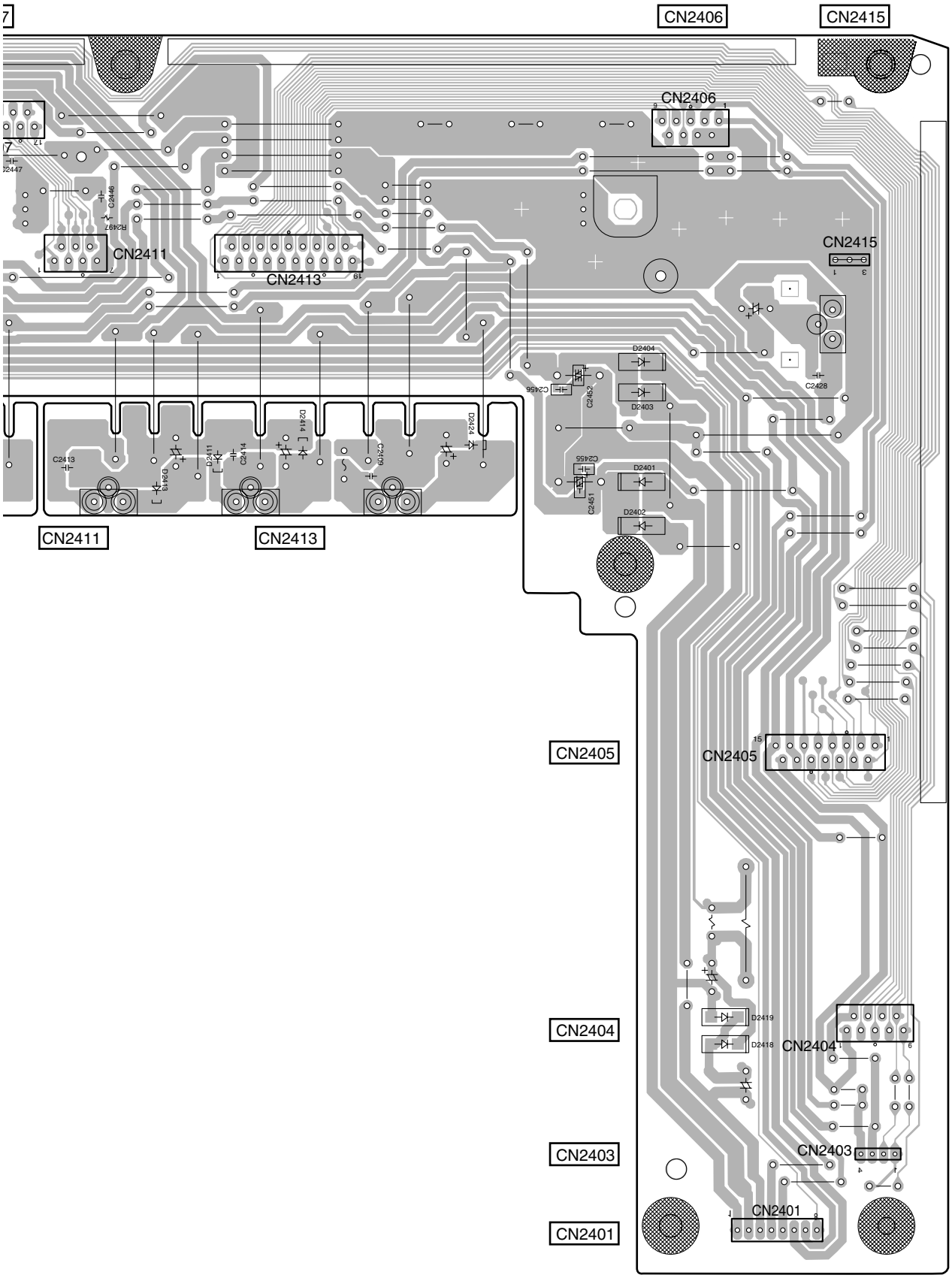
SIDE B

• For VSX-55TXi

AC REGULATOR ASSY

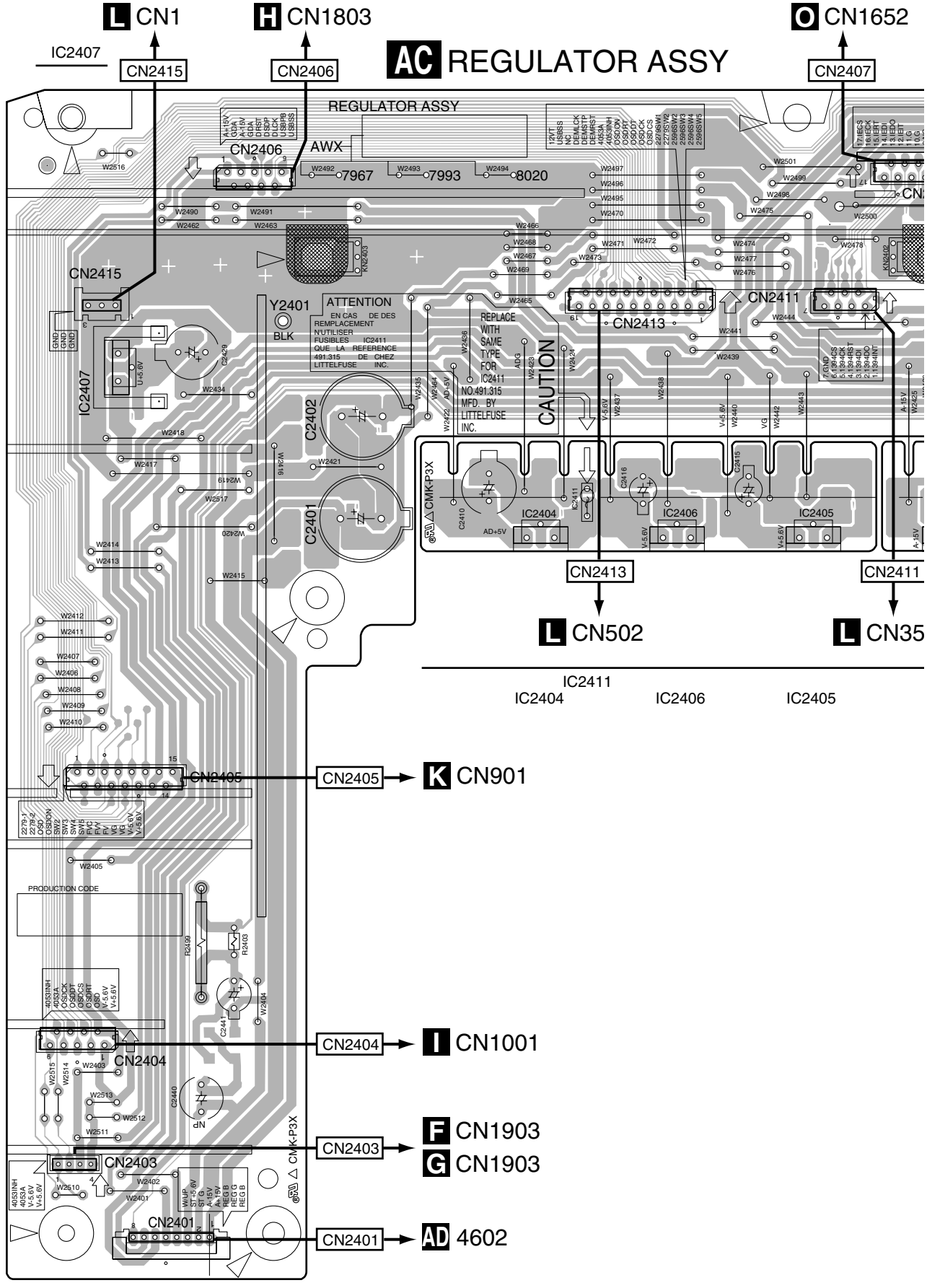


SIDE B

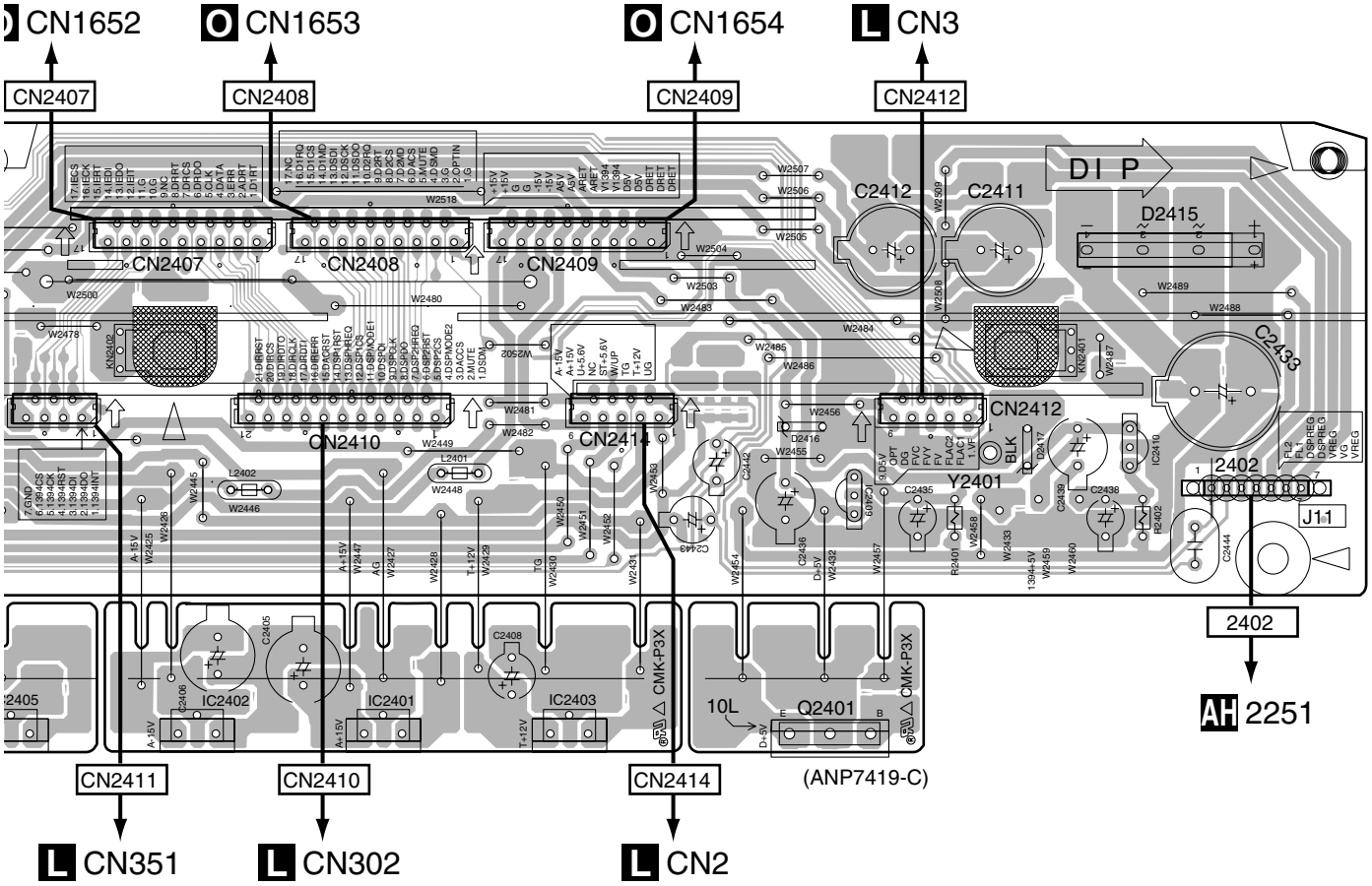

CN2406
CN2415
CN2411
CN2413
CN2405
CN2404
CN2403
CN2401
D2404
D2403
D2401
D2402
D2419
D2418
C2428
C2456
C2452
C2455
C2451
C2413
C2414
C2409
D2411
D2413
D2414
D2424

SIDE A

• For VSX-53TX



SIDE A

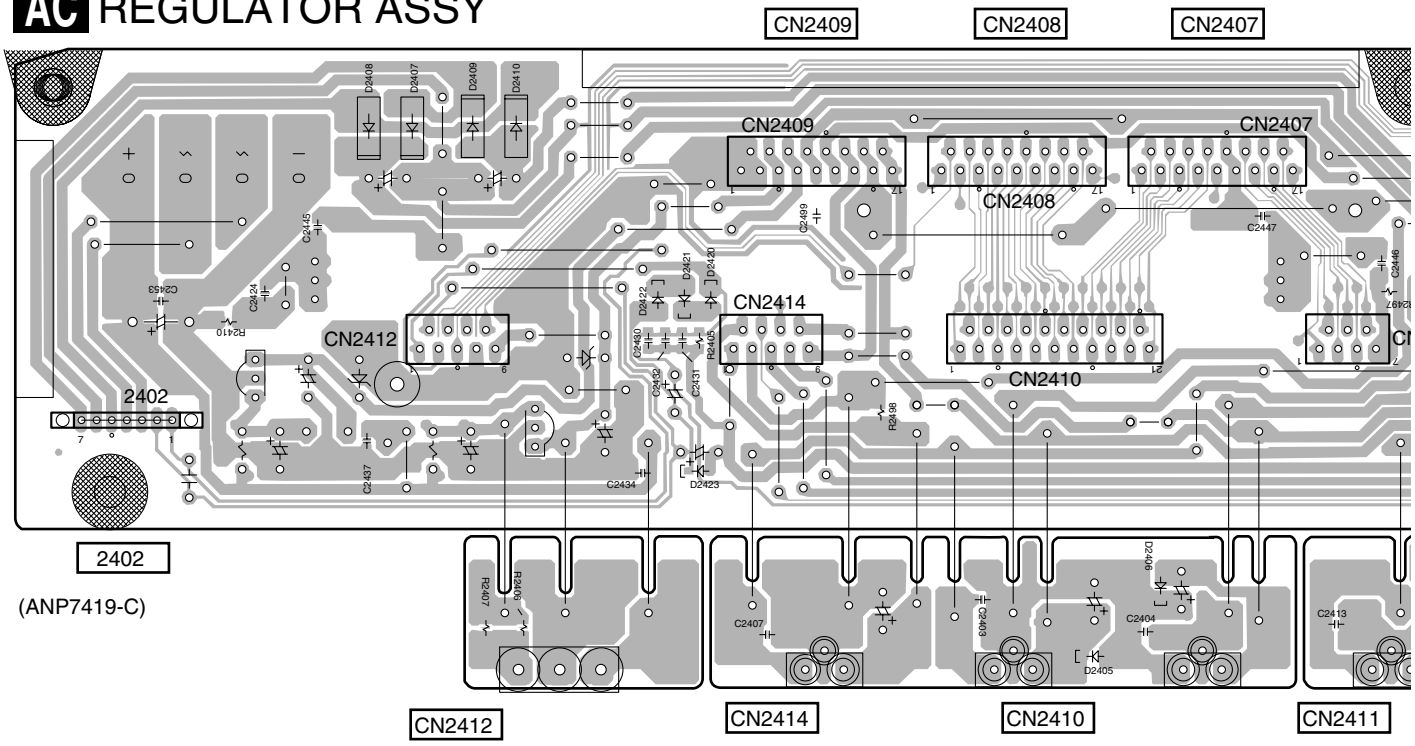


IC2405 IC2402 IC2401 IC2403 IC2409 Q2401 Q2402 IC2410

SIDE B

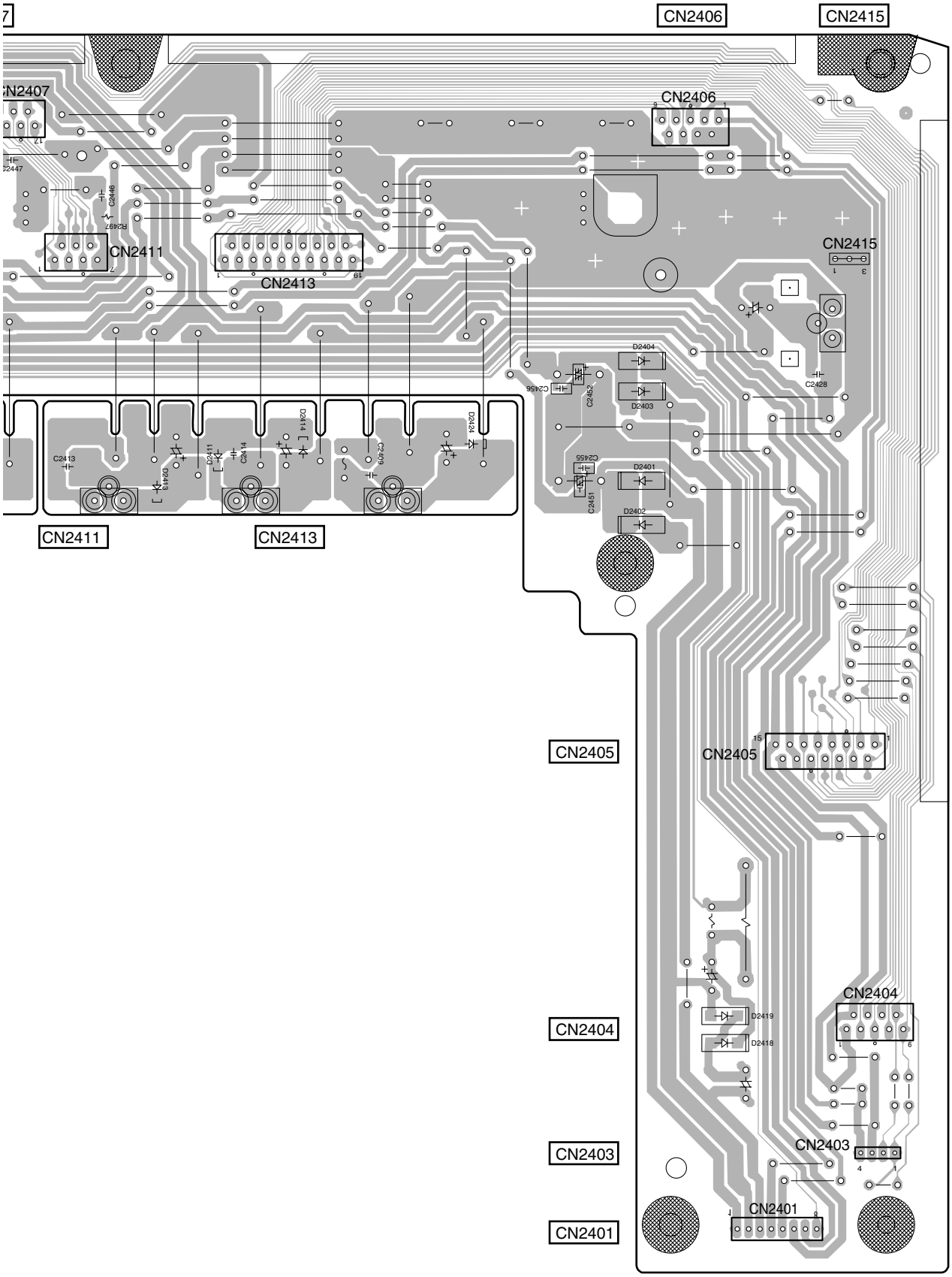
• For VSX-53TX

AC REGULATOR ASSY



(ANP7419-C)

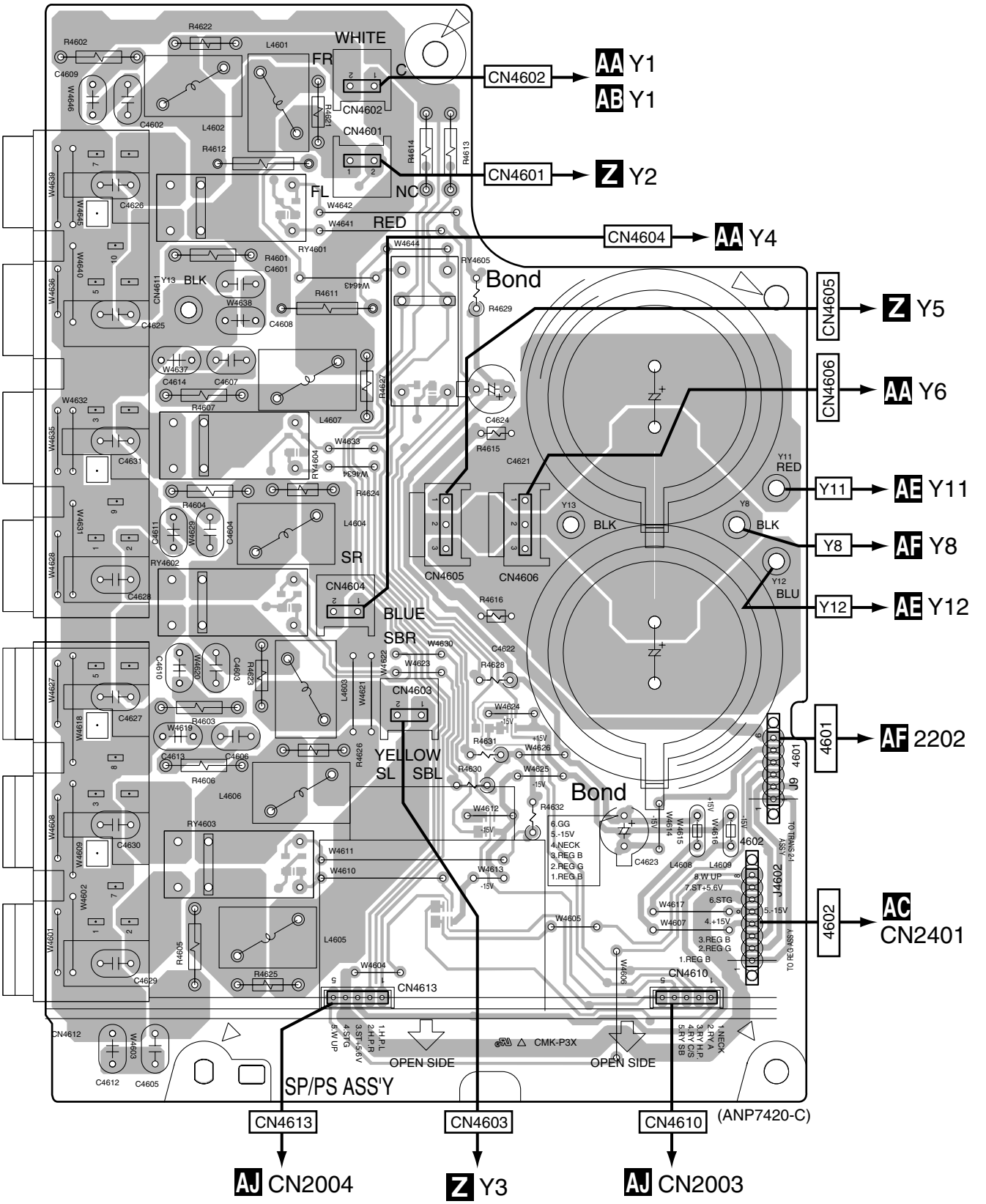
SIDE B


CN2406
CN2415
CN2407
CN2406
CN2411
CN2413
CN2415
D2404
D2403
D2401
D2402
C2428
C2456
C2452
C2455
C2451
C2413
D2413
D2411
C2411
D2414
C2409
D2412
CN2411
CN2413
CN2405
CN2405
CN2404
CN2404
D2419
D2418
CN2403
CN2403
CN2401
CN2401

4.19 SP/PS ASSY

SIDE A **SIDE A**

AD SP/PS ASSY

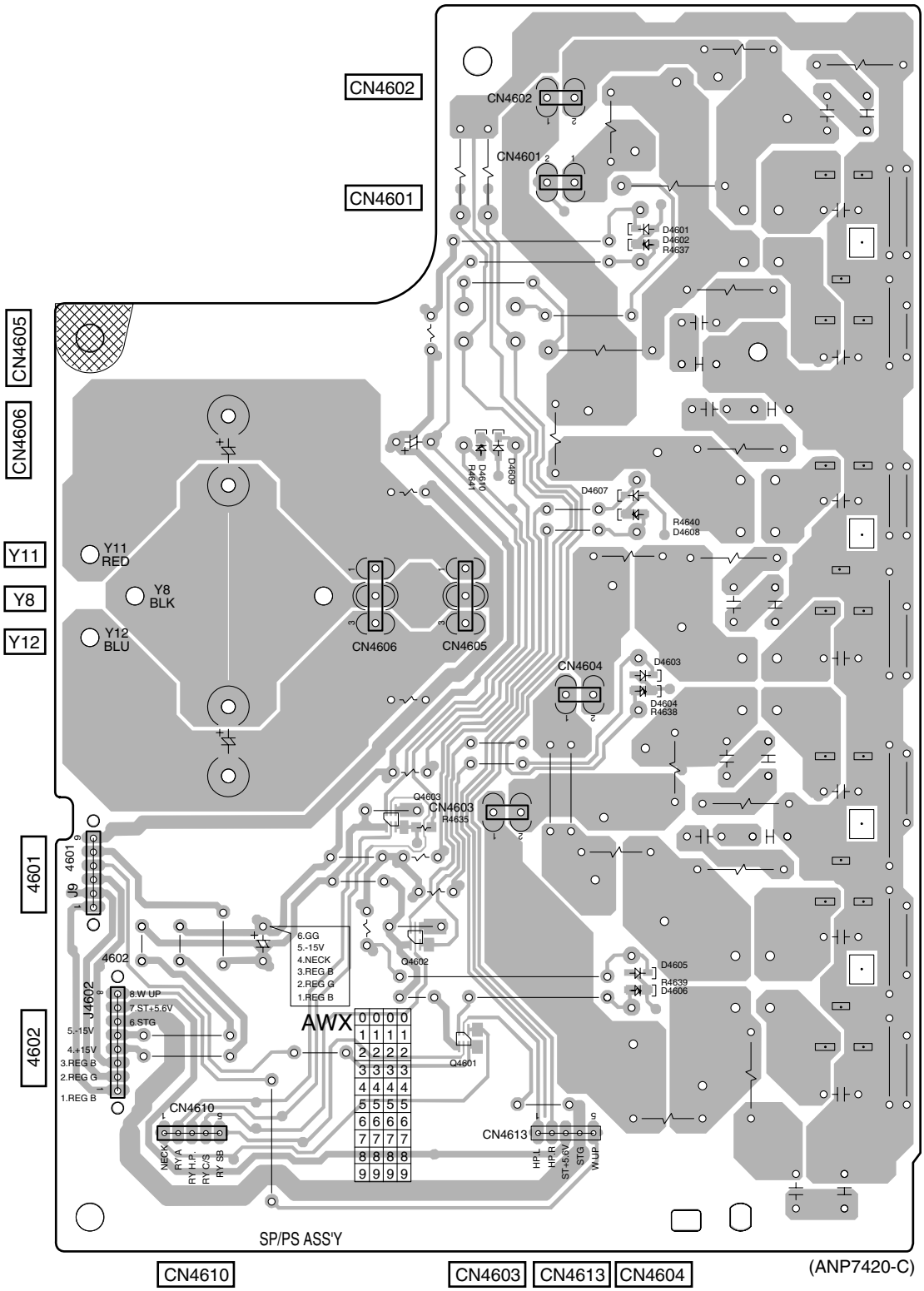


AD **AD**

SIDE B

SIDE B

AD SP/PS ASSY



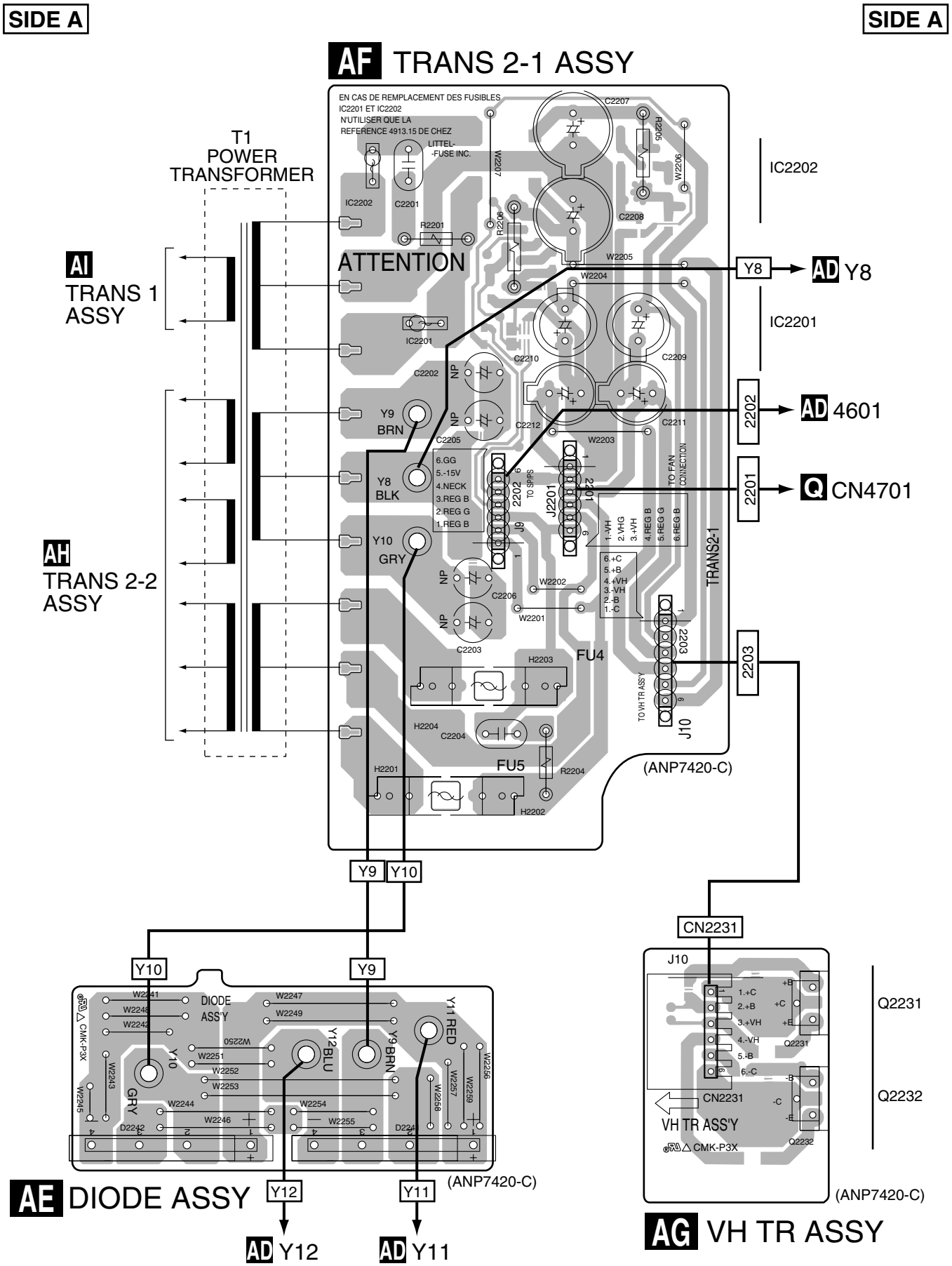
CN4610 CN4603 CN4613 CN4604

Q4603
Q4602
Q4601

AD

AD

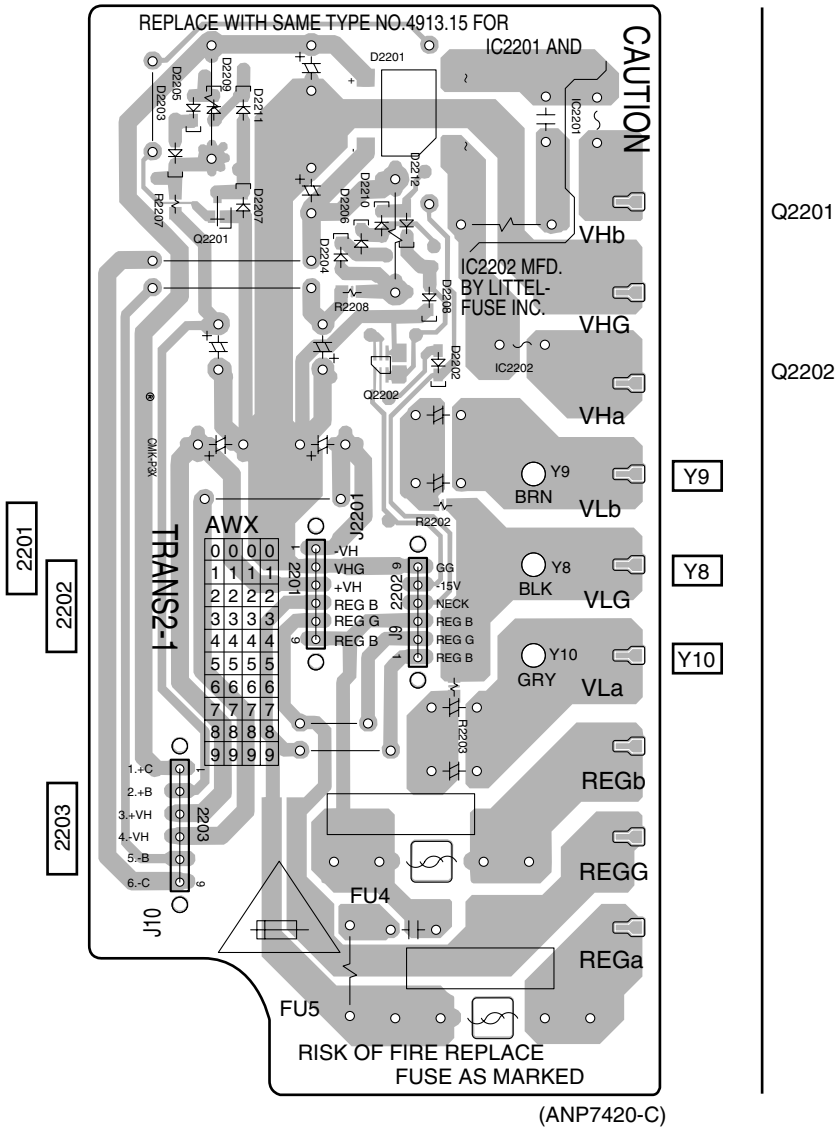
4.20 DIODE, TRANS 2-1 and VH TR ASSYS



SIDE B

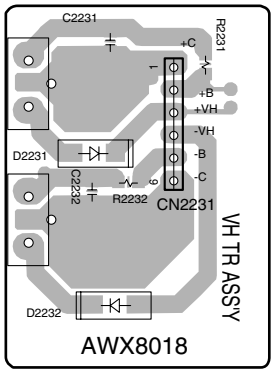
SIDE B

AF TRANS 2-1 ASSY

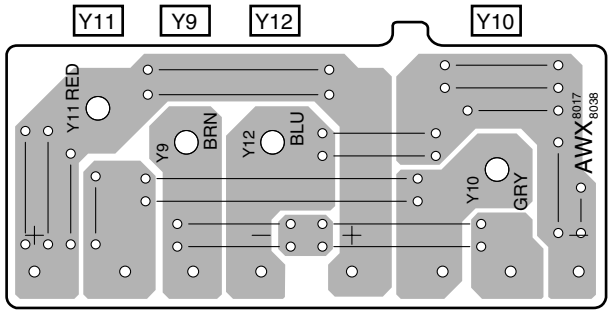


(ANP7420-C)

AG VH TR ASSY



(ANP7420-C)



(ANP7420-C)

AE DIODE ASSY

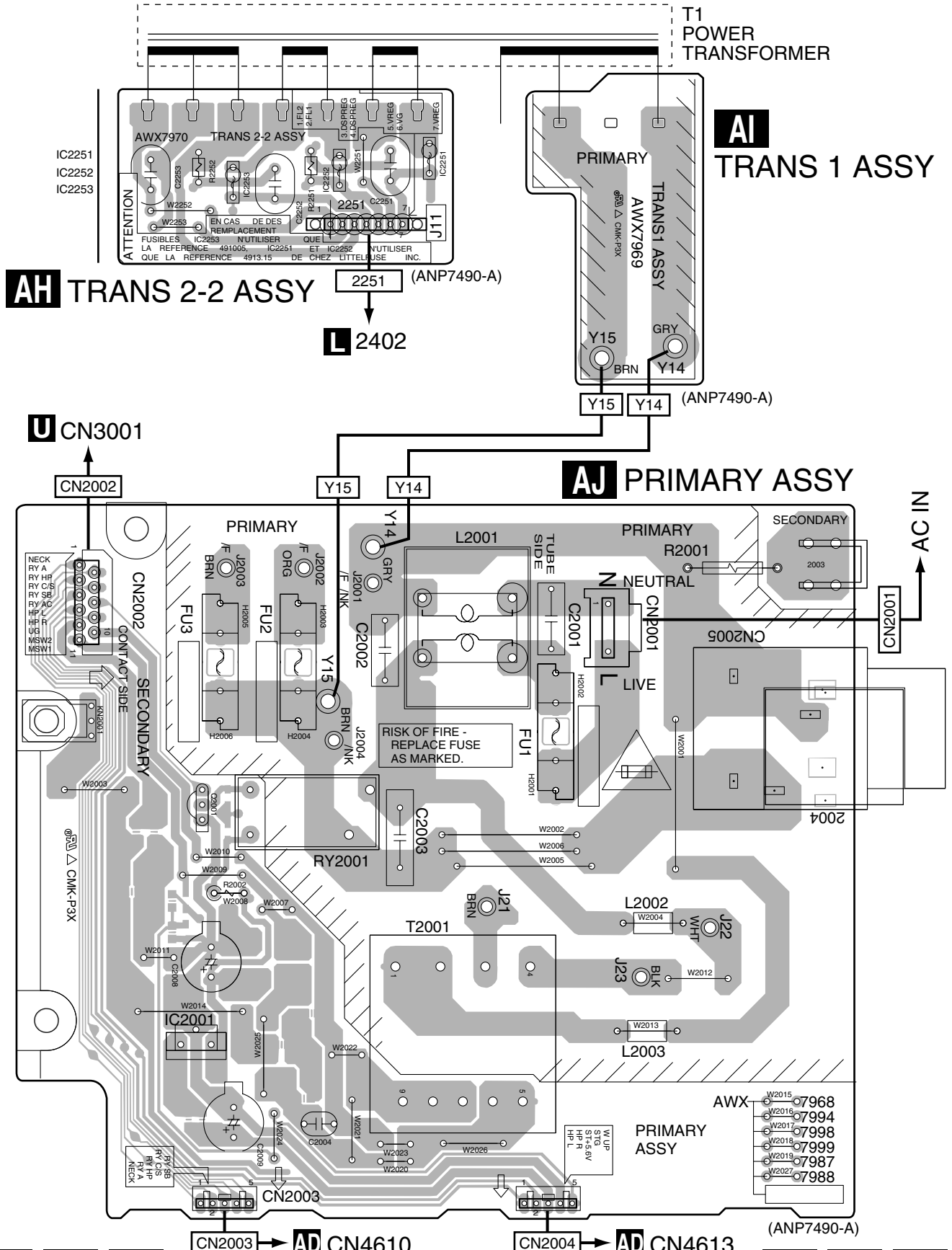
AE AF AG

AE AF AG

4.21 TRANS 2-2, TRANS 1 and PRIMARY ASSYS

SIDE A **SIDE A**

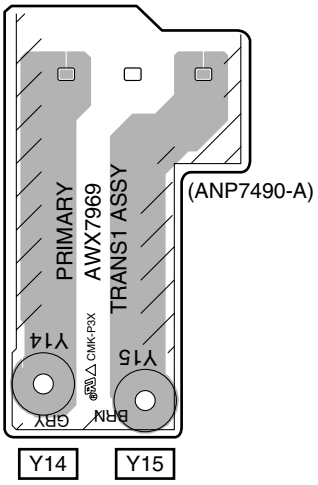
• For VSX-55TXi



SIDE B **SIDE B**

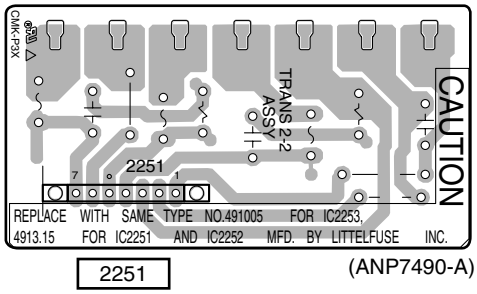
• **For VSX-55TXi**

AI TRANS 1 ASSY



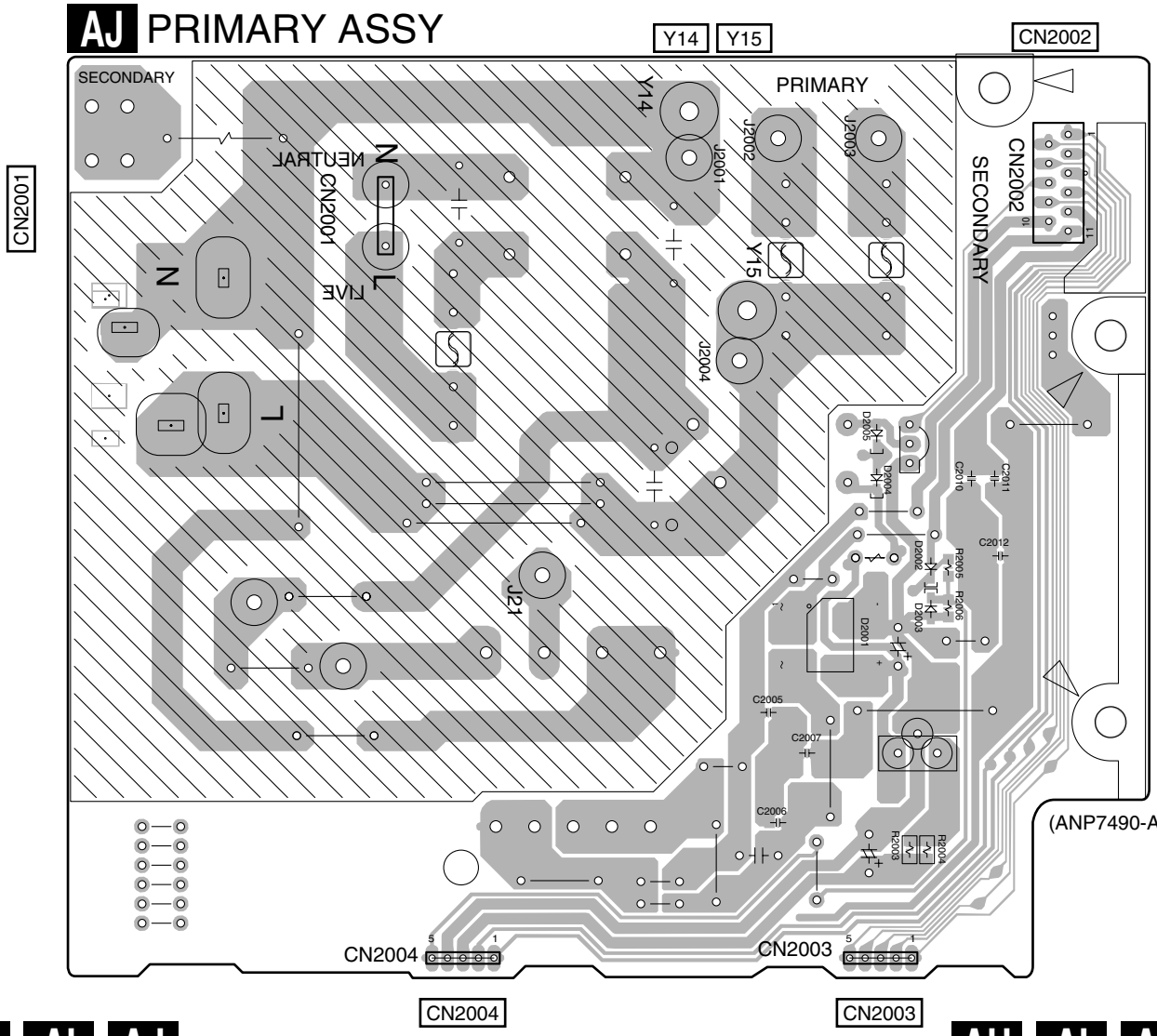
Y14 Y15

AH TRANS 2-2 ASSY



2251

AJ PRIMARY ASSY

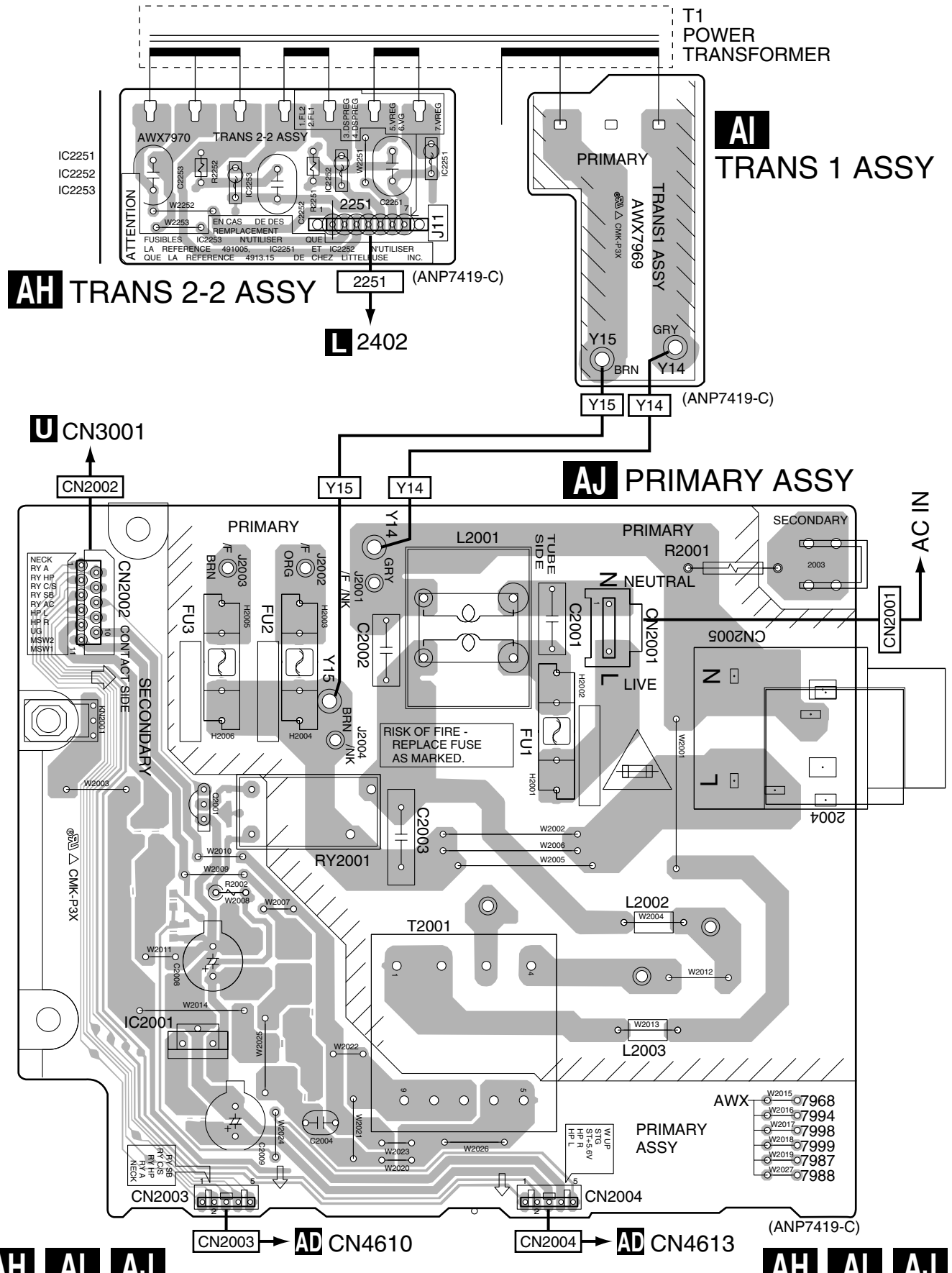


CN2001 CN2004 CN2003

AH AI AJ **AH AI AJ**

SIDE A **SIDE A**

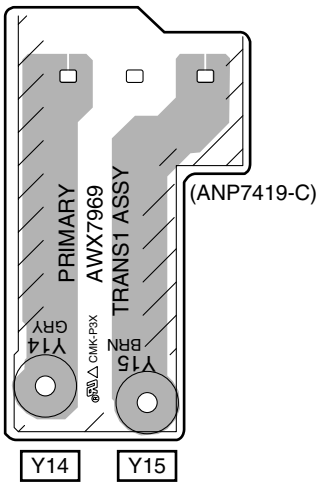
• For VSX-53TX



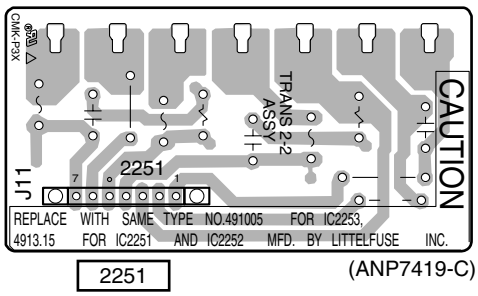
SIDE B **SIDE B**

• For VSX-53TX

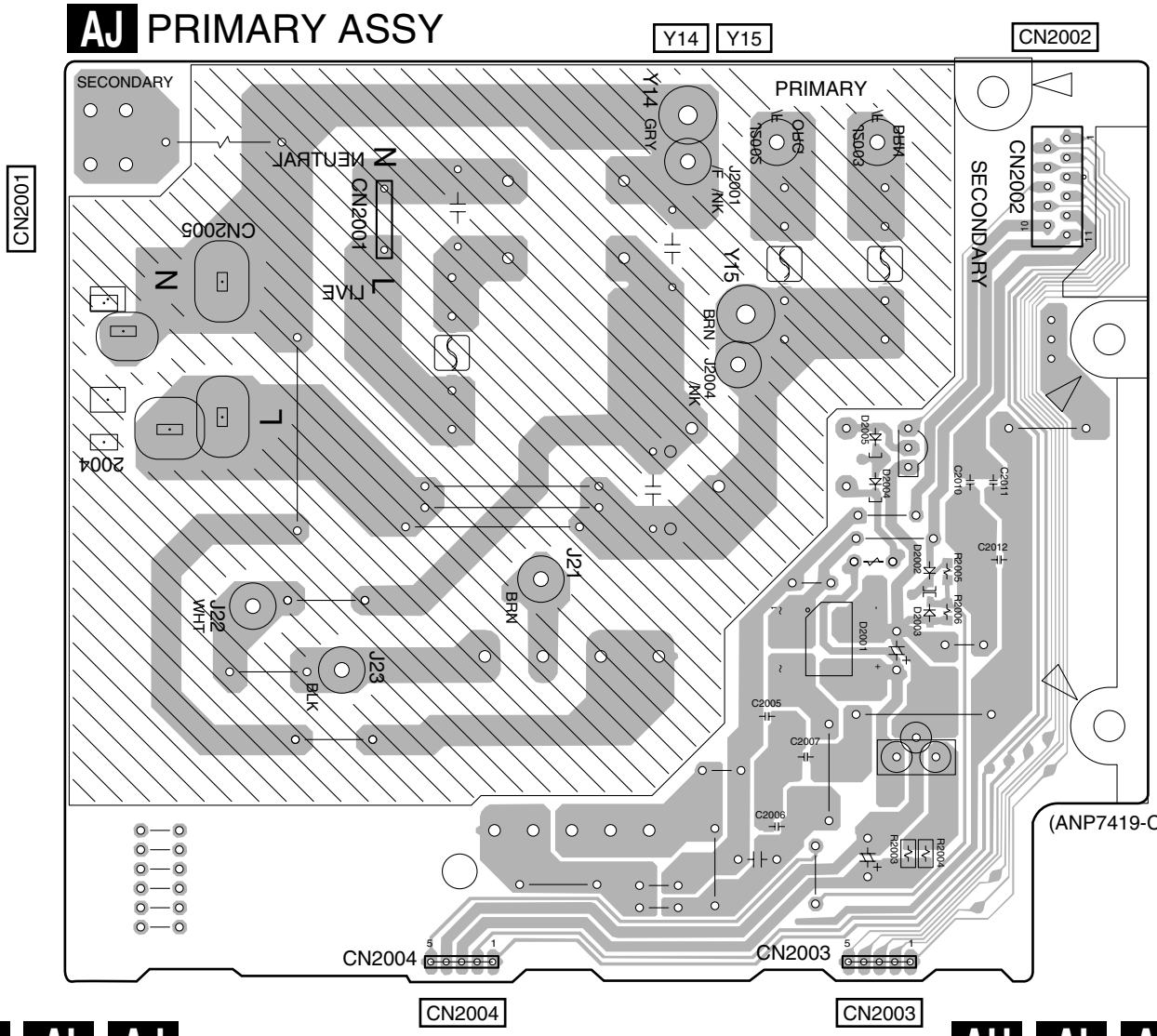
AI TRANS 1 ASSY



AH TRANS 2-2 ASSY



AJ PRIMARY ASSY

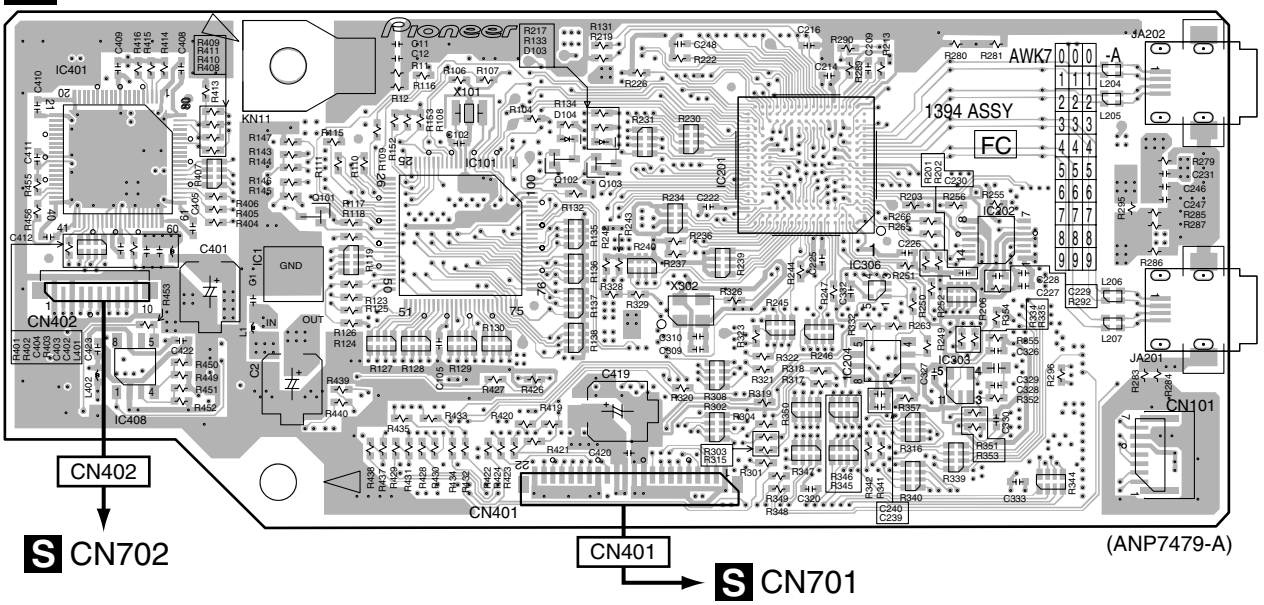


AH AI AJ **AH AI AJ**

4.22 1394 ASSY (VSX-55TXi ONLY)

SIDE A **SIDE A**

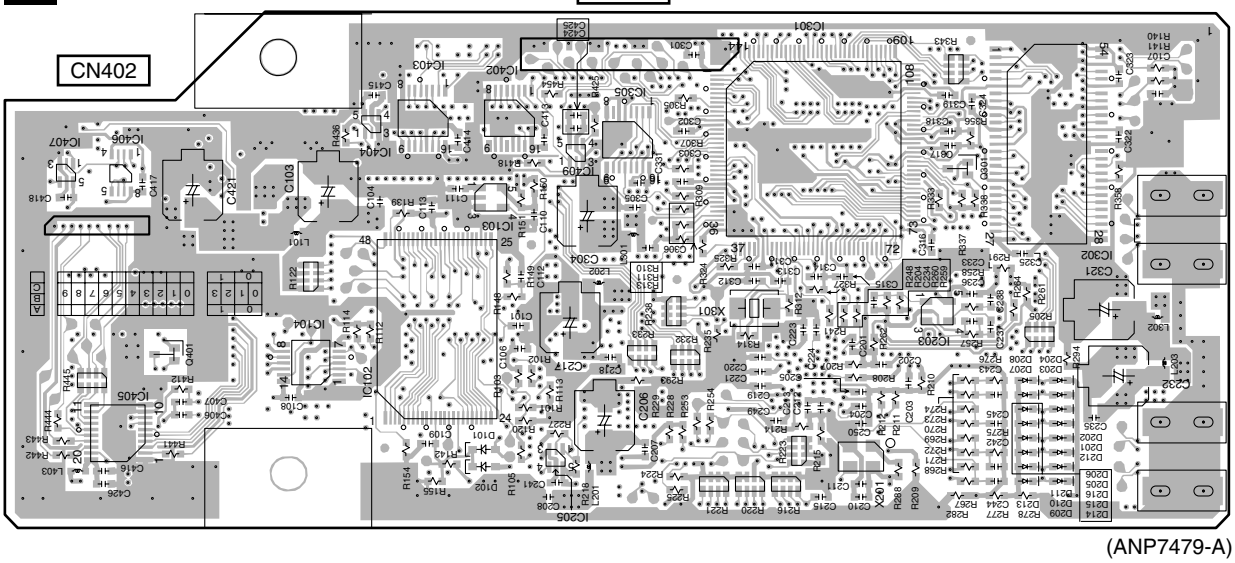
T 1394 ASSY



IC401 Q101 IC101 Q102 Q103 IC201 IC306 IC202
IC408 IC205 IC303

SIDE B **SIDE B**

T 1394 ASSY

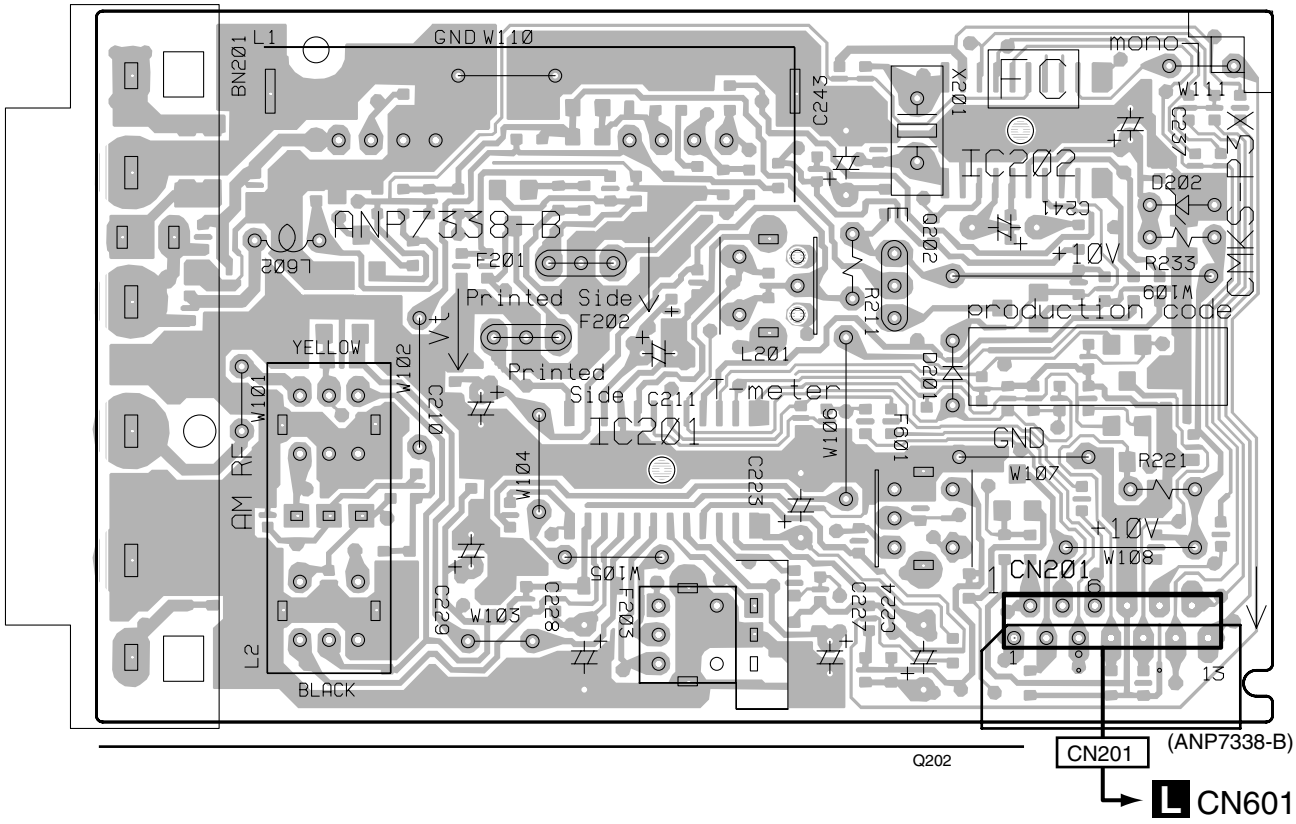


IC407 IC406 IC404 IC403 IC402 IC409 IC305 IC301 Q301
IC405 Q401 IC104 IC102 IC103 IC205 IC203

4.23 FM/AM TUNER MODULE

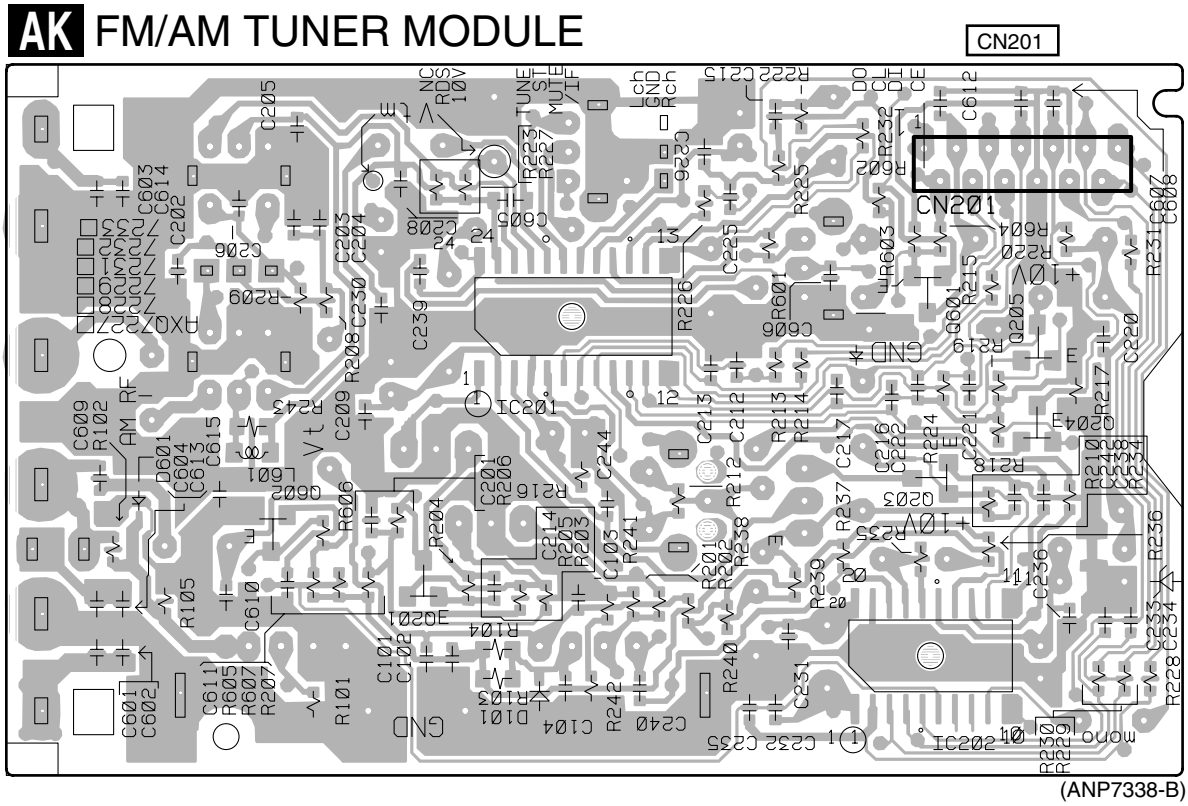
SIDE A

AK FM/AM TUNER MODULE



SIDE B

AK FM/AM TUNER MODULE



5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

• LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	1..FM/AM TUNER MODULE	AXQ7231	AXQ7231
NSP	1..REGULATOR ASSY	AWK7784	AWK7731
	2..PRIMARY ASSY	AWX7968	AWX7968
	2..TRANS 1 ASSY	AWX7969	AWX7969
	2..TRANS 2-2 ASSY	AWX7970	AWX7970
	2..FAN DRIVE ASSY	AWX7976	AWX7976
	2..POWER AMP IN ASSY	AWX7982	AWX7982
	2..REGULATOR ASSY	AWX8303	AWX7967
	2..7.1 CH I/O ASSY	AWX8306	AWX7973
NSP	1..COMPLEX ASSY	AWK7788	AWK7791
	2..RS232C ASSY	AWX7966	Not used
	2..12V TRIGGER ASSY	Not used	AWX8310
	2..VOLUME ASSY	AWX7971	AWX7971
	2..MULTI JOG ASSY	AWX7972	AWX7972
	2..INPUT CONNECT ASSY	AWX7974	AWX7974
	2..FRONT IN ASSY	AWX7977	AWX7977
	2..OPTICAL IN ASSY	AWX7978	AWX7978
	2..HEADPHONE ASSY	AWX7980	AWX7980
	2..DIODE ASSY	AWX8017	AWX8017
	2..VH TR ASSY	AWX8018	AWX8018
	2..SP/PS ASSY	AWX8307	AWX7975
	2..V-AUDIO IN ASSY	AWX8313	AWX7964
	2..TRANS 2-1 ASSY	AWX8326	AWX8326
NSP	1..MAIN ASSY	AWK7776	AWK7780
	2..MIC & F.OPT IN ASSY	AWX7981	AWX7981
	2..MIC AMP ASSY	AWX8004	AWX8004
	2..FAN CONNECTION ASSY	AWX8005	AWX8005
	2..MAIN CONTROL ASSY	AWX8285	AWX8289
	2..COMPONENT ASSY	AWX8293	AWX8295
	2..DSP CONNECTION ASSY	AWX8299	AWX8024
	2..COAXIAL IN ASSY	AWX8300	AWX8323
	2..VIDEO ASSY	AWX8311	AWX7962
NSP	1..POWER AMP ASSY	AWK7792	AWK7733
	2..POWER AMP-L ASSY	AWX7984	AWX7984
	2..POWER AMP-R ASSY	AWX7985	AWX7985
	2..POWER AMP-C ASSY	AWX7986	AWX7986
	2..DISPLAY ASSY	AWX8315	AWX7983
	1..DSP ASSY	AWX8249	AWX8249
	1..1394 ASSY	AWK7768	Not used

• CONTRAST OF PCB ASSEMBLIES

A 7.1CH I/O ASSY

AWX8306 and AWX7973 are constructed the same except for the following :

Mark	Symbol and Description	AWX8306	AWX7973
	1301–1304 4P PIN JACK	AKB7075	Not used
	CN1301–CN1304 4P PIN JACK	Not used	AKB7015

B V-AUDIO IN ASSY

AWX8313 and AWX7964 are constructed the same except for the following :

Mark	Symbol and Description	AWX8313	AWX7964
	1201, 1203 4P PIN JACK	AKB7075	Not used
	CN1201, CN1203 4P PIN JACK	Not used	AKB7015
	CN1205 6P PIN JACK	AKB7162	AKB7009

H COAXIAL IN ASSY

AWX8300 and AWX8323 are constructed the same except for the following :

Mark	Symbol and Description	AWX8300	AWX8323
	IC1681	PCM2902EG	Not used
	IC1682	TC7SET08F	Not used
	C1680, C1697	CKSRYB103K50	Not used
	C1681	CEAT470M16	Not used
	C1683-C1686, C1689, C1690, C1698	CKSRYB104K16	Not used
	C1687	CCSRCH220J50	Not used
	C1688	CCSRCH180J50	Not used
	R1681	RS1/16S152J	Not used
	R1682, R1683	RS1/16S220J	Not used
	R1686	RS1/16S105J	Not used
	R1687	RS1/16S470J	Not used
	R1689	RS1/16S222J	Not used
	R1690	RS1/16S101J	Not used
	X1681 CRYSTAL RESONATOR (12.0MHz)	ASS7047	Not used
	JA1681 USB CONNECTOR	DKN1237	Not used
	JA1802 2P PIN JACK	AKB7148	AKB7131

I COMPONENT ASSY

AWX8293 and AWX8295 are constructed the same except for the following :

Mark	Symbol and Description	AWX8293	AWX8295
	JA1001–JA1003 3P PIN JACK	VKB1151	VKB1150

K VIDEO ASSY

AWX8311 and AWX7962 are constructed the same except for the following :

Mark	Symbol and Description	AWX8311	AWX7962
	JA901–JA903 COMB. JACK (2S+2P)	AKB7160	AKB7147
	JA904 COMB. JACK (S+1P)	AKB7159	AKB7146
	JA905 1P PIN JACK	VKB1156	VKB1122

L MAIN CONTROL ASSY

AWX8285 and AWX8289 are constructed the same except for the following :

Mark	Symbol and Description	AWX8285	AWX8289
	IC501	PD5948A8	PD5899A
	Q101, Q102	2SC3326	Not used
	Q103	DTA124EK	Not used
	C139, C140	CCSRCH470J50	Not used
	R135, R136	RS1/16S912J	RS1/16S0R0J

Mark	Symbol and Description	AWX8285	AWX8289
	R137, R138	RS1/16S102J	Not used
	R141, R142	RS1/16S472J	Not used
	R143	RS1/16S473J	Not used
	R331, R352–R354, R356	RS1/16S221J	Not used
	R351	RS1/16S0R0J	Not used
	R355	RS1/16S101J	Not used
	R357, R358	Not used	RS1/16S0R0J
	R523, R524	Not used	RS1/16S473J
	JA111–JA113 4P PIN JACK	VKB1133	VKB1132

O DSP CONNECTION ASSY

AWX8299 and AWX8024 are constructed the same except for the following :

Mark	Symbol and Description	AWX8299	AWX8024
	IC1653	TC74LVX244FT	Not used
	L1652	QTL1013	Not used
	C1653	CKSRYB104K16	Not used
	R1655	Not used	RS1/16S0R0J
	R1656, R1676, R1678	RS1/16S0R0J	Not used
	R1659, R1660, R1662	RS1/16S151J	Not used

U DISPLAY ASSY

AWX8315 and AWX7983 are constructed the same except for the following :

Mark	Symbol and Description	AWX8315	AWX7983
	D3010	UDZS6.2B	Not used
	D3011	NSPB500-0008	Not used
	R3064	RS1/16S222J	Not used

AC REGULATOR ASSY

AWX8303 and AWX7967 are constructed the same except for the following :

Mark	Symbol and Description	AWX8303	AWX7967
⚠	IC2410	NJM78L05A	Not used
⚠	Q2402	2SA1803	Not used
⚠	D2421, D2422	UDZS15B	UDZ15B
	C2401, C1402	ACH7191	CEAT332M35
	C2433	ACH7192	CEAT472M16
	C2437	CKSRYB103K50	Not used
	C2438	CEAT2R2M50	Not used
	R2402	RD1/4MUF470J	Not used
	R2408, R2409	RS1/16S100J	Not used

AD SP/PS ASSY

AWX8307 and AWX7975 are constructed the same except for the following :

Mark	Symbol and Description	AWX8307	AWX7975
⚠	C4621, C4622 (22000uF/63V)	ACH7190	ACH7169
	CN4611 8P SPEAKER TERMINAL	AKE7099	AKE7074
	CN4612 6P SPEAKER TERMINAL	AKE7100	AKE7075

• PARTS LIST FOR VSX-55TXi

Mark No.	Description	Part No.

REGULATOR ASSY

OTHERS

Y15	BOARD IN JUMPER	ADX7418
Y14	BOARD IN JUMPER	ADX7419
J11	JUMPER WIRE 7P	D20PYY0745E

COMPLEX ASSY

OTHERS

Y8	BOARD IN JUMPER	ADX7284
Y9	BOARD IN JUMPER	ADX7285
Y10	BOARD IN JUMPER	ADX7286
Y11	BOARD IN JUMPER	ADX7287
Y12	BOARD IN JUMPER	ADX7288
J9	JUMPER WIRE 6P	D20PYY0615E

A 7.1 CH I/O ASSY

SEMICONDUCTORS

IC1301-IC1304	UPC4570G2
Q1351,Q1352,Q1361,Q1362	HN1C03F
Q1371,Q1372,Q1381,Q1382	HN1C03F

CAPACITORS

C1301-C1304,C1307,C1308	CCSRCH101J50
C1311-C1314,C1317,C1318	CCSRCH101J50
C1321-C1324,C1327,C1328	CCSRCH101J50
C1331-C1334,C1337,C1338	CCSRCH101J50
C1351,C1352,C1361,C1362	CCSRCH331J50
C1371,C1372,C1381,C1382	CCSRCH331J50
C1309,C1310,C1319,C1320	CEAT100M50
C1329,C1330,C1339,C1340	CEAT100M50
C1305,C1306,C1315,C1316	CEAT4R7M50
C1325,C1326,C1335,C1336	CEAT4R7M50
C1341-C1348,C1391-C1394	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

1301-1304	4P PIN JACK	AKB7075
CN1306	5P SOCKET	AKP7066
CN1307,CN1308	9P SOCKET	AKP7068

B V-AUDIO IN ASSY

SEMICONDUCTORS

Q1201,Q1202	2SC2878

CAPACITORS

C1201-C1212	CCSRCH221J50
C1213-C1215	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

1201,1203	4P PIN JACK	AKB7075
CN1205	6P PIN JACK	AKB7162
CN1204	17P SOCKET	AKP7072

C FRONT IN ASSY

COILS AND FILTERS

L1501-L1504	CHIP BEAD	VTL1077

CAPACITORS

C1507-C1509	CCSRCH101J50
C1501,C1502	CCSRCH221J50
C1505	CKSRYB102K50
C1504,C1506	CKSRYB103K50
C1503	CKSRYB472K50
C1510	CKSRYB473K50

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1501	7P FFC CONNECTOR	52044-0745
JA1501	FRONT INPUT	AKX7016
KN1501	EARTH METAL FITTING	VNF1084

D OPTICAL IN ASSY

COILS AND FILTERS

F1701	CHIP BEAD	DTF1064

CAPACITORS

C1706	CEAT470M16
C1701-C1705	CKSRYF104Z16

RESISTORS

All Resistors	RS1/16S###J

OTHERS

CN1701	9P FFC CONNECTOR	52045-0945
JA1701,JA1702	OPTICAL LINK IN	GP1FA502RZ
JA1703,JA1704	OPTICAL LINK OUT	GP1FA502TZ

E INPUT CONNECT ASSY

SEMICONDUCTORS

IC1401	M62429FP
IC1451	UPC4570G2
D1401	UDZS5.1B

CAPACITORS

C1406,C1407	CCSQCH101J50
C1401-C1405,C1451,C1452	CEAT100M50
C1454,C1455	CKSRYB103K50
C1453	CKSRYB472K50

RESISTORS

R1405	RS3LMF391J
Other Resistors	RS1/16S###J

OTHERS

CN1407	5P PLUG	AKP7055
CN1406,CN1408	9P PLUG	AKP7057
CN1405	17P PLUG	AKP7061
CN1402	7P SOCKET	AKP7067
CN1404	9P SOCKET	AKP7068
CN1403	13P SOCKET	AKP7070

Mark	No.	Description	Part No.
	CN1401	15P SOCKET	AKP7071

F RS232C ASSY

SEMICONDUCTORS

⚠	IC1932 PROTECTOR(125mA)	AEK7020
⚠	IC1931	BA12T
	IC1901	SP232AEN
	Q1931	2SB1237X
	Q1901	2SC1740S
	Q1932	DTC124EK
	D1901,D1902,D1921	1SS355

COILS AND FILTERS

	L1901	LAU1R0J

CAPACITORS

	C1901	CEAT101M16
	C1903-C1906	CEAT1R0M50
	C1932,C1933	CEHAT100M50
	C1902,C1907,C1911,C1921,C1931	CKSRYB103K50
	C1934-C1936	CKSRYB103K50
	C1909	CKSRYB331K50

RESISTORS

	R1932	RS3LMF470J
	Other Resistors	RS1/16S###J

OTHERS

	JA1921 MULTI-ROOM JACK	AKN7014
	CN1901 D-SUB SOCKET	AKP1213
	CN1902 KR CONNECTOR	B8B-PH-K
	CN1903 4P SOCKET	KP200TA4L
	JA1922 REMOTE CONTROL JACK	RKN1004
	1901 SCREW TERMINAL	VNE1948

G 12V TRIGGER ASSY (VSX-53TX only)

SEMICONDUCTORS

⚠	IC1932 PROTECTOR(125mA)	AEK7020
⚠	IC1931	BA12T
	Q1931	2SB1237X
	Q1932	DTC124EK
	D1921	1SS355

CAPACITORS

	C1932,C1933	CEHAT100M50
	C1911,C1921,C1931	CKSRYB103K50
	C1934-C1936	CKSRYB103K50

RESISTORS

	R1932	RS3LMF470J
	Other Resistors	RS1/16S###J

OTHERS

	JA1921 MULTI-ROOM JACK	AKN7014
	CN1902 KR CONNECTOR	B8B-PH-K
	CN1903 4P SOCKET	KP200TA4L
	JA1922 REMOTE CONTROL JACK	RKN1004
	1901 SCREW TERMINAL	VNE1948

H COAXIAL IN ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1681		PCM2902EG
	IC1881		TC74HCU04AF
	IC1682		TC7SET08F

COILS AND FILTERS

	F1881 CHIP BEAD	DTF1064

CAPACITORS

	C1688	CCSRCH180J50
	C1687	CCSRCH220J50
	C1885,C1886	CCSRCH470J50
	C1887,C1896	CCSRCH471J50
	C1681	CEAT470M16
	C1890	CEAT470M25
	C1680,C1697,C1857,C1858	CKSRYB103K50
	C1883,C1884,C1888,C1897	CKSRYB103K50
	C1683-C1686,C1689,C1690,C1698	CKSRYB104K16
	C1889	CKSRYB105K6R3

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1801 19P FFC CONNECTOR	52045-0945
	JA1802 2P PIN JACK	AKB7148
	CN1803 9P SOCKET	AKP7068
	JA1681 USB CONNECTOR	DKN1237
	CN1802 20P FFC CONNECTOR	VKN1196
	X1681 CRYSTAL RESONATOR (12.0MHz)	ASS7047

I COMPONENT ASSY

SEMICONDUCTORS

	IC1051	PDC084A
	IC1001,IC1052	TC74HC4053AF
	IC1002,IC1003	TK15450M
	Q1051,Q1052	DTC124EK
	D1051,D1052	1SS355

COILS AND FILTERS

	L1051,L1052	LCYA100J2520
	L1053	LCYA330J2520

CAPACITORS

	C1060	CCSRCH101J50
	C1055	CCSRCH150J50
	C1056	CCSRCH180J50
	C1057,C1058	CCSRCH240J50
	C1024-C1026,C1059	CCSRCH470J50
	C1017,C1018,C1023,C1029	CCSRCK2R0C50
	C1013,C1014,C1019,C1020	CEAT101M16
	C1027,C1028,C1051,C1053,C1063	CEAT101M16
	C1007,C1008,C1015,C1016	CKSRYB103K50
	C1021,C1022,C1065,C1066	CKSRYB103K50
	C1052,C1054,C1061,C1062	CKSRYB473K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1001 9P SOCKET	AKP7068
	JA1001-JA1003 3P PIN JACK	VKB1151
	X1051 CRYSTAL RESONATOR (14.32MHz)	ASS1056

Mark No.	Description	Part No.

K VIDEO ASSY

SEMICONDUCTORS

IC933		BU4053BCF
IC902		NJM2279M
IC901, IC931		NJM2296M
IC932		NJM2596M
IC903		TC4W53FU
Q901, Q931, Q932		2SA933S
Q933		IMZ1A
D901, D902		DAN202K

CAPACITORS

C981–C983		CCSRCH101J50
C919, C960, C963		CCSRCH150J50
C922–C925, C969–C974		CCSRCH181J50
C955		CCSRCH330J50
C914		CCSRCH470J50
C901–C904, C932, C935, C938		CEAT101M10
C941		CEAT101M10
C905, C906, C909, C910, C918		CEAT101M16
C945, C946, C951, C952, C959		CEAT101M16
C933, C936, C939, C942		CEAT1R0M50
C920, C961, C964		CEAT470M25
C943		CKSRYB103K50
C931, C934, C937, C940, C944		CKSRYB104K16
C966–C968		CKSRYB104K16
C907, C908, C911–C913		CKSRYB473K50
C915, C916, C921, C947, C948		CKSRYB473K50
C953, C954, C957, C958, C962		CKSRYB473K50
C965		CKSRYB473K50

RESISTORS

R920, R966		RD1/2VM221J
R969		RD1/2VM471J
Other Resistors		RS1/16S###J

OTHERS

JA904	COMB. JACK (S+1P)	AKB7159
JA901–JA903	COMB. JACK (2S+2P)	AKB7160
CN901	15P SOCKET	AKP7071
JA905	1P PIN JACK	VKB1156

L MAIN CONTROL ASSY

SEMICONDUCTORS

IC502, IC503		BU4094BCF
IC202		NJM4558MD
IC501		PD5948A8
IC511		TC74VHC08FT
IC302		TC74VHCT244AFT
IC103		TC9163AF
IC201		TC9164AF
IC104		TC9215AF
IC101		TC9274F-019
IC701–IC704		TC94A07F
IC102, IC711–IC714		UPC4570G2
Q601		2SC1740S
Q101, Q102		2SC3326
Q103, Q251, Q511		DTA124EK
Q501		DTC143EK
D501, D511, D521–D524		1SS355
D821, D822, D831, D832		1SS355
D601		UDZS11B

COILS AND FILTERS

L501		LCYA2R2J2520
L891–L895	CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C508	EDL CAPACITOR	ACH7132
C125–C127, C151–C153		CCSRCH101J50
C201–C203, C725–C727		CCSRCH101J50
C745–C747, C765–C767		CCSRCH101J50
C785–C787		CCSRCH101J50
C139, C140, C662		CCSRCH470J50
C719, C720, C739, C740		CCSRCH680J50
C759, C760, C779, C780		CCSRCH680J50
C131, C132, C621, C622		CEAT100M50
C701, C702, C713, C714		CEAT100M50
C733, C734, C753, C754		CEAT100M50
C773, C774		CEAT100M50
C303, C304, C602		CEAT101M16
C211, C212		CEAT1R0M50
C506, C513		CEAT221M10
C505		CEAT2R2M50
C503		CEAT331M10
C717, C718, C721, C722		CEAT470M25
C737, C738, C741, C742		CEAT470M25
C757, C758, C761, C762		CEAT470M25
C777, C778, C781, C782		CEAT470M25
C133, C134		CEAT470M50
C511		CEAT471M10
C748, C749, C768, C769		CEV100M16
C788, C789		CEV100M16
C510		CKSQYF105Z16
C601		CKSQYF225Z16
C128, C129, C137, C138		CKSRYB103K50
C155–C157, C204, C205		CKSRYB103K50
C213, C214, C251, C302, C502		CKSRYB103K50
C507, C509, C514, C515, C535		CKSRYB103K50
C540, C598, C711, C712		CKSRYB103K50
C723, C724, C731, C732		CKSRYB103K50
C743, C744, C751, C752		CKSRYB103K50
C763, C764, C771, C772		CKSRYB103K50
C783, C784, C891, C892		CKSRYB103K50
C512		CKSRYB472K50
C154, C599, C821, C831		CKSRYB473K50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN552	10P FFC CONNECTOR	52045-1045
CN601	13P FFC CONNECTOR	52045-1345
CN801	24P FFC CONNECTOR	52045-2445
CN501	32P FFC CONNECTOR	52045-3245
CN201	7P PLUG	AKP7056
CN103	9P PLUG	AKP7057
CN102	13P PLUG	AKP7059
CN101	15P PLUG	AKP7060
CN351	7P SOCKET	AKP7067
CN2, CN3	9P SOCKET	AKP7068

Mark	No.	Description	Part No.
	CN502	19P SOCKET	AKP7073
	CN302	21P SOCKET	AKP7074
	CN551	KR CONNECTOR	B8B-PH-K
	CN1	3P PLUG	KM250NA3L
	JA591	REMOTE CONTROL JACK	RKN1004
	JA592	REMOTE CONTROL JACK	RKN1026
	551	PCB BINDER	VEF1040
	JA111–JA113	4P PIN JACK	VKB1133
	CN301	21P FFC CONNECTOR	VKN1197
	X501	CERAMIC RESONATOR (15.7MHz)	ASS7032

M MIC & F.OPT IN ASSY

COILS AND FILTERS

	L1601	CHIP FERRITE BEAD	ATL7002
⚠	L1602,L1603	CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C1601,C1606		CCSRCH471J50
C1603		CEAL470M16
C1611		CKSRYB102K50
C1602,C1612,C1614		CKSRYB103K50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN1601	4P FFC CONNECTOR	52044-0445
J1601	CORD WITH PLUG	ADX7417
JA1601	OPTICAL LINK IN	GP1FA502RZ
JA1606	REMOTE CONTROL JACK	RKN1004
CN1602	KR CONNECTOR	S3B-PH-K

N MIC AMP ASSY

SEMICONDUCTORS

⚠	IC4751		NJM78L05A
	IC4752		UPC4570G2
	D4751,D4752		UDZS5.1B

CAPACITORS

C4753		CCSRCH101J50
C4754		CCSRCH330J50
C4751,C4752,C4755-C4757		CEAT100M50
C4758,C4762-C4765		CKSRYB473K50

RESISTORS

R4756		RD1/4MUF471J
Other Resistors		RS1/16S###J

OTHERS

CN4752	4P JUMPER CONNECTOR	52147-0410
CN4751	KR CONNECTOR	B3B-PH-K
	PCB BINDER	VEF1040
KN4751	EARTH METAL FITTING	VNF1084

O DSP CONNECTION ASSY

SEMICONDUCTORS

IC1651,IC1653		TC74LVX244FT

COILS AND FILTERS

L1651,L1652	CHIP SOLID INDUCTOR	QTL1013

Mark	No.	Description	Part No.

CAPACITORS

C1651		CKSRYB103K50
C1653		CKSRYB104K16

RESISTORS

All Resistors		RS1/16S###J

OTHERS

CN1652-CN1654	17P SOCKET	AKP7072
CN1651	B TO B CONNECTOR 50P	AKP7177

P POWER AMP IN ASSY

SEMICONDUCTORS

Q4001		2SC2412K
D4001		1SS355

CAPACITORS

C4002		CKSRYB104K16
C4001		CKSRYB223K50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

4001	10P CABLE HOLDER	51048-1000
CN4001	24P FFC CONNECTOR	52044-2445
CN4003	17P PLUG	AKP7061
CN4002	19P PLUG	AKP7062
J12	JUMPER WIRE 10P	D20PYY1010E
CN4004	3P L TYPE PLUG	KM250MA3L

Q FAN CONNECTION ASSY

SEMICONDUCTORS

⚠	IC4701,IC4702	PROTECTOR(200mA)	AEK7023

OTHERS

4701	9P CABLE HOLDER	51048-0900
CN4701	6P JUMPER CONNECTOR	52147-0610
J4701	JUMPER WIRE 9P	D20PYY0915E
CN4702	3P PLUG	KM250MA3

R FAN DRIVE ASSY

SEMICONDUCTORS

	Q4056		2SA1037K
	Q4051		2SC4793D1
	Q4052		DTA124EK
	Q4055		DTC114EK
	Q4053		DTC124EK
⚠	D4051,D4052		1SR154-400
	D4059		1SS355
	D4055		UDZS12B
	D4053		UDZS27B
	D4057		UDZS5.1B

CAPACITORS

C4054		CEAT101M16
C4052		CEAT1R0M50
C4055,C4056		CEAT221M63
C4051		CEAT471M35

Mark	No.	Description	Part No.
	C4053		CKSRYB103K50

RESISTORS

	All Resistors		RS1/16S###J

OTHERS

	CN4051	9P JUMPER CONNECTOR	52147-0910
	CN4054	10P JUMPER CONNECTOR	52147-1010

S DSP ASSY

SEMICONDUCTORS

	IC201	AK4114VQ
	IC561	AK4382AVT
	IC501, IC521, IC541	AK4383VT
	IC101	AK5380VT
	IC301, IC401	DSPC56367PV150
	IC451	IC61LV25616-12T
	IC302	IC61LV6416-12T
	IC303	IC63LV1024-12T
⚠	IC901	NJM2391DL1-33
	IC601, IC621, IC641, IC661, IC681	NJM4565MD
⚠	IC902	NJU7223DL1-18
	IC471	PD8118A
	IC701	TC74VHC157FT
	IC304	TC74VHCU04FT
	IC503, IC705, IC706	TC7SH04FU
	IC305	TC7WH125FU
	Q681, Q682	2SK208
	Q683, Q701, Q971, Q972, Q974	UN5112
	Q684, Q702, Q973	UN5212
	Q601, Q621, Q641, Q661	XP4506
	D681, D682, D721	1SS355
	D702	DAN202K
	D701, D971, D972	DAP202K
	D101–D104	RB501V-40

COILS AND FILTERS

	L301–L304, L401, L402, L451	ATL7002
	L471, L904, L906, L907 CHIP FERRITE BEAD	ATL7002
	L101–L104, L201–L203	QTL1013
	L305, L306, L501, L503, L511	QTL1013
	L521, L531, L541, L551, L561	QTL1013
	L571, L701, L705, L706 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

	C339, C340	CCSRCH100D50
	C202	CCSRCH150J50
	C623, C625, C643–C646	CCSRCH151J50
	C663–C666	CCSRCH151J50
	C201	CCSRCH220J50
	C204, C206, C209, C301, C302	CCSRCH471J50
	C304, C306, C308, C309, C312	CCSRCH471J50
	C314, C316, C318, C319	CCSRCH471J50
	C321, C322, C325, C326	CCSRCH471J50
	C329, C330, C332, C333, C335	CCSRCH471J50
	C345, C346, C402, C404–C408	CCSRCH471J50
	C410–C418, C420–C422	CCSRCH471J50
	C424–C426, C471	CCSRCH471J50
	C603–C606	CCSRCH820J50
	C111, C112, C502, C522, C542	CEV100M16
	C562, C607, C608, C627, C628	CEV100M16
	C647, C648, C667, C668	CEV100M16
	C681, C682	CEV100M16
	C104, C105, C551, C907, C909	CEV101M16
	C106	CEV2R2M50
	C901, C902	CEV330M25
	C210, C341, C401	CEV470M6R3
	C212, C614, C618, C624, C626	CKSRYB102K50
	C683–C685, C689, C693, C695	CKSRYB102K50
	C927	CKSRYB102K50
	C337, C343, C349, C429, C503	CKSRYB103K50
	C619, C620, C677, C678, C701	CKSRYB103K50
	C711–C716, C747, C921, C922	CKSRYB103K50
	C941	CKSRYB103K50
	C101–C103, C205, C207, C208	CKSRYB104K16
	C211, C305, C307, C310, C311	CKSRYB104K16
	C313, C315, C324, C331, C334	CKSRYB104K16
	C352, C409, C419, C423, C427	CKSRYB104K16
	C451, C452, C501, C521, C541	CKSRYB104K16
	C561, C591, C630, C705, C706	CKSRYB104K16
	C906, C908	CKSRYB104K16
	C303, C338, C348, C403, C599	CKSRYB105K6R3
	C702	CKSRYB105K6R3
	C109, C110, C622	CKSRYB222K50
	C601, C602, C609, C610	CKSRYB332K50
	C621, C641, C642, C661, C662	CKSRYB392K50
	C629, C649, C650, C669, C670	CKSRYB472K50
	C971	CKSRYB472K50
	C926	CKSRYB473K16
	C203	CKSRYB474K10
	C323, C428	CKSRYB563K16
	C107, C611–C613, C615	CKSRYF104Z25
	C671, C672, C694, C696–C698	CKSRYF104Z25

RESISTORS

	R851	RAB4C101J
	R204, R225, R226, R229, R701	RAB4C104J
	R712	RAB4C104J
	R221	RS1/16S1802F
	Other Resistors	RS1/16S###J

OTHERS

	CN102	B TO B CONNECTOR 50P	AKP7176
	X201	CRYSTAL RESONATOR (24MHz)	ASS7025
	X301	CRYSTAL RESONATOR (33MHz)	ASS7040
	CN702	10P FFC CONNECTOR	VKN1414
	CN101	20P FFC CONNECTOR	VKN1424
	CN601	21P FFC CONNECTOR	VKN1425
	CN701	22P FFC CONNECTOR	VKN1426
	KN931	EARTH METAL FITTING	VNF1109

T 1394 ASSY

SEMICONDUCTORS

	IC302	K4S641632F-TC75
⚠	IC1	NJM2391DL1-33
	IC303	NJU7093AF
	IC101	PD5787A
	IC301	PD8112A

Mark	No.	Description	Part No.
	IC103		PST9245
	IC401		SM5816AF
	IC405		TC74VHC541FT
	IC104		TC74VHCT125AFT
	IC205		TC7SH08FU
	IC409		TC7SZ126FU
	IC201		TSB43CA42GGW
	Q101, Q301		DTA124EUA
	Q401		DTA143EUA
	D102		RB501V-40

COILS AND FILTERS

	L1, L101, L201–L203	ATL7002
	L301, L302, L401, L403	ATL7002
	CHIP FERRITE BEAD	
⚠	L204–L207 COIL	VTH1043

CAPACITORS

	C329 (10u/6.3V)	ACG7046
	C2, C401 (220u/6.3V)	ACH7195
	C242, C243	CCSRCH221J50
	C402	CCSRCH471J50
	C419	CEV101M16
	C103, C206, C217, C232, C304	CEVL101M6R3
	C321	CEVL101M6R3
	C113, C211, C213, C215, C216	CKSRYB102K50
	C310, C324	CKSRYB102K50
	C101, C111	CKSRYB103K50
	C1, C102, C104–C110	CKSRYB104K16
	C201–C205, C207, C209, C210	CKSRYB104K16
	C212, C214, C218–C226, C235	CKSRYB104K16
	C241, C246–C249, C301–C303	CKSRYB104K16
	C305, C309, C311, C315–C320	CKSRYB104K16
	C322, C323, C325, C327, C333	CKSRYB104K16
	C404, C405, C408–C412, C416	CKSRYB104K16
	C420, C424	CKSRYB104K16
	C244, C245, C326	CKSRYB105K6R3
	C330	CKSRYB472K50
	C328	CKSRYB474K10

RESISTORS

	R119, R127–R130, R205	RAB4C101J
	R230–R233, R245, R246, R445	RAB4C101J
	R122	RAB4C103J
	R407	RAB4C221J
	R308, R339, R340, R343–R347	RAB4C470J
	R350	RAB4C470J
	R135–R138, R206, R216	RAB4C472J
	R220, R221, R223, R234	RAB4C472J
	R238–R240	RAB4C472J
	R302, R402	RAB4C680J
	R275, R276	RS1/16S5101F
	R267–R274	RS1/16S56R0D
	R213	RS1/16S6341D
	Other Resistors	RS1/16S###J

OTHERS

	CN101 7P CONNECTOR	RKN1048
	CN402 10P CONNECTOR	VKN1414
	CN401 22P CONNECTOR	VKN1426
	JA201, JA202 1394-TERMINAL	VKN1800
	X302 CRYSTAL RESONATOR (22.5792MHz)	ASS7054
	X201 CRYSTAL RESONATOR (24.5760MHz)	ASS7055
	X101 CERAMIC RESONATOR (6.14MHZ)	VSS1179

U DISPLAY ASSY

SEMICONDUCTORS

	IC3000	PD5771B
	IC3002	RPM7140-H4
	IC3001	TC7W53FU
	Q3003	2SA1037K
	Q3001,Q3002	DTC124EK
	Q3000	FMA1A
	Q3004	HN1C01FU
	D3002-D3008	1SS355
	D3001	BR5064X
	D3009	DAN202K
	D3000	MAA5064X
	D3011	NSPB500-0008
	D3010	UDZS6.2B

COILS AND FILTERS

	L3000 CHIP FERRITE BEAD	ATL7002

SWITCHES AND RELAYS

	S3000-S3017	ASG7013

CAPACITORS

	C3003,C3004,C3007,C3024,C3025	CCSRCH101J50
	C3020,C3021,C3026,C3027	CEJQ100M16
	C3028,C3029	CEJQ101M10
	C3008,C3012,C3035	CEJQ101M6R3
	C3022,C3023	CEJQ330M25
	C3000-C3002	CKSRYB102K50
	C3009,C3011,C3032-C3034	CKSRYB103K50
	C3036,C3037	CKSRYB103K50
	C3006,C3031	CKSRYB104K16
	C3010	CKSRYB153K50
	C3030	CKSRYF104Z50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	3008 4P CABLE HOLDER	51048-0400
	3002 5P CABLE HOLDER	51048-0500
	3003 7P CABLE HOLDER	51048-0700
	CN3007 3P FFC CONNECTOR	52045-0345
	CN3004 4P FFC CONNECTOR	52045-0445
	CN3005 7P FFC CONNECTOR	52045-0745
	CN3001 11P FFC CONNECTOR	52045-1145
	CN3006 32P FFC CONNECTOR	52045-3245
	V3000 FL TUBE	AAV7087
	J3008 JUMPER WIRE 4P	D20PYY0415E
	J3002 JUMPER WIRE 5P	D20PYY0510E
	J3003 JUMPER WIRE 7P	D20PYY0715E
	3001 FL HOLDER	VNF1085
	X3000 CERAMIC RESONATOR (4.19MHz)	ASS7042

Mark	No.	Description	Part No.

V VOLUME ASSY

SWITCHES AND RELAYS

	S3402-S3404	ASG7013
	S3401	ASX7037

CAPACITORS

	C3401,C3402	CKSRYB103K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN3401 5P JUMPER CONNECTOR	52147-0510

X MULTI JOG ASSY

SWITCHES AND RELAYS

	S3452-S3455	ASG7013
	S3451	ASX7038

CAPACITORS

	C3451,C3452	CKSRYB103K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN3451 7P JUMPER CONNECTOR	52147-0710

Y HEADPHONE ASSY

CAPACITORS

	C1951,C1952	CKSRYB392K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1951 3P FFC CONNECTOR	52045-0345
	1951 PHONE JACK	AKN7029
	KN1951 EARTH METAL FITTING	VNF1084

Z POWER AMP-L ASSY

SEMICONDUCTORS

⚠	IC4101,IC4201,IC4301	PA9009A
⚠	IC4102,IC4202,IC4302	PBD001A
⚠	IC4103,IC4203,IC4303,IC4453	PBD002A
	Q4102,Q4202,Q4302	2SA1255
	Q4101,Q4201,Q4301	2SC3326
	D4102,D4104-D4107,D4202	1SS355
	D4204-D4207,D4302,D4304-D4307	1SS355
	D4101,D4103,D4201,D4203,D4301	UDZS10B
	D4303	UDZS10B

CAPACITORS

	C4106,C4107,C4206,C4207	ACG7041
	C4306,C4307 (220u/100V)	ACG7041
	C4102,C4202,C4302	CCSRCH331J50
	C4112,C4113,C4212,C4213	CCSRCH6R0D50
	C4312,C4313	CCSRCH6R0D50
	C4114,C4214,C4314	CEANP1R0M50
	C4401,C4402	CEAT331M63
	C4110,C4111,C4210,C4211	CEHAT100M2A
	C4310,C4311	CEHAT100M2A
	C4101,C4201,C4301	CEHAT100M50
	C4103,C4203,C4303	CEHAT331M10
	C4104,C4105,C4204,C4205	CEHAT470M63
	C4304,C4305	CEHAT470M63
	C4108,C4109,C4208,C4209	CEHAZL470M25
	C4308,C4309	CEHAZL470M25

RESISTORS

⚠	R4131,R4132,R4231,R4232	ACN7107
⚠	R4331,R4332,R4482 (0.1ohm)	ACN7107
⚠	R4119,R4219,R4319 (0.22ohm/5W)	ACN7121
	Other Resistors	RS1/16S###J

OTHERS

	Y2 LEAD WITH HOUSING	ADX7398
	Y3 LEAD WITH HOUSING	ADX7399
	Y5 LEAD WITH HOUSING	ADX7404
	CN4401 17P SOCKET	AKP7072
	CN4403 3P L TYPE PLUG	KM250MA3
	CN4456 10P PLUG	KM250NA10L
	KN4401,KN4402 EARTH METAL FITTING	VNF1084

AA POWER AMP-R ASSY

SEMICONDUCTORS

⚠	IC4151,IC4251,IC4351	PA9009A
⚠	IC4152,IC4252,IC4352,IC4452	PBD001A
⚠	IC4153,IC4253,IC4353	PBD002A
	Q4152,Q4252,Q4352	2SA1255
	Q4403,Q4404	2SC2412K
	Q4151,Q4251,Q4351	2SC3326
	D4152,D4154-D4157,D4252	1SS355
	D4254-D4257,D4352,D4354-D4357	1SS355
	D4151,D4153,D4251,D4253,D4351	UDZS10B
	D4353	UDZS10B

CAPACITORS

	C4156,C4157,C4256,C4257	ACG7041
	C4356,C4357 (220u/100V)	ACG7041
	C4152,C4252,C4352	CCSRCH331J50
	C4162,C4163,C4262,C4263	CCSRCH6R0D50
	C4362,C4363	CCSRCH6R0D50
	C4164,C4264,C4364	CEANP1R0M50
	C4405	CEAT331M10
	C4403,C4404	CEAT331M63
	C4160,C4161,C4260,C4261	CEHAT100M2A
	C4360,C4361	CEHAT100M2A
	C4151,C4251,C4351	CEHAT100M50
	C4153,C4253,C4353	CEHAT331M10
	C4154,C4155,C4254,C4255	CEHAT470M63
	C4354,C4355	CEHAT470M63
	C4158,C4159,C4258,C4259	CEHAZL470M25
	C4358,C4359	CEHAZL470M25

RESISTORS

⚠	R4181,R4182,R4281,R4282	ACN7107
⚠	R4381,R4382,R4481 (0.1ohm)	ACN7107
⚠	R4169,R4269,R4369 (0.22ohm/5W)	ACN7121
	Other Resistors	RS1/16S###J

Mark	No.	Description	Part No.
OTHERS			
	Y1	LEAD WITH HOUSING	ADX7397
	Y4	LEAD WITH HOUSING	ADX7400
	Y6	LEAD WITH HOUSING	ADX7404
	CN4402	19P SOCKET	AKP7073
	CN4454	10P PLUG	KM250NA10L
	KN4403,KN4404	EARTH METAL FITTING	VNF1084

AB POWER AMP-C ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC4451		PA9009A
	Q4452		2SA1255
	Q4451		2SC3326
	D4452,D4454-D4457		1SS355
	D4451,D4453		UDZS10B
CAPACITORS			
	C4456,C4457	(220u/100V)	ACG7041
	C4452		CCSRCH331J50
	C4462,C4463		CCSRCH6R0D50
	C4464		CEANP1R0M50
	C4460,C4461		CEHAT100M2A
	C4451		CEHAT100M50
	C4453		CEHAT331M10
	C4454,C4455		CEHAT470M63
	C4458,C4459		CEHAZL470M25
RESISTORS			
⚠	R4469	(0.22ohm/5W)	ACN7121
	Other Resistors		RS1/16S###J
OTHERS			
	CN4453,CN4455	10P SOCKET	KP250NA10

AC REGULATOR ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC2411	PROTECTOR(315mA)	AEK7003
⚠	IC2409		NJM78L05A
	IC2410		NJM78L05A
⚠	IC2404		NJM78M05FA
⚠	IC2403		NJM78M12FA
⚠	IC2401		NJM78M15FA
⚠	IC2405,IC2407		NJM78M56FA
⚠	IC2406		NJM79M05FA
⚠	IC2402		NJM79M15FA
⚠	Q2401		2SA1803
	Q2402		2SA1803
⚠	D2401-D2404,D2407-D2410		1SR154-400
⚠	D2418,D2419		1SR154-400
	D2411		1SS355
⚠	D2415		D3SBA20(B)
	D2405,D2406,D2413,D2414		RB501V-40
	D2420		UDZS10B
	D2421,D2422		UDZS15B
	D2423,D2424		UDZS6.2B
CAPACITORS			
	C2401,C2402	(3300u/35V)	ACH7191
	C2433	(4700u/16V)	ACH7192
	C2446		CCSRCH101J50
	C2440		CEANP470M35
	C2443		CEAT101M10
	C2415,C2416		CEAT101M16
	C2408		CEAT101M25
	C2405,C2406,C2410,C2429		CEAT221M35
	C2411,C2412		CEAT222M16
	C2435,C2438		CEAT2R2M50
	C2442		CEAT470M50
	C2441		CEAT470M63
	C2436,C2439		CEAT471M16
	C2451,C2452		CKSRYB102K50
	C2403,C2404,C2407,C2409		CKSRYB103K50
	C2413,C2414,C2428,C2434,C2437		CKSRYB103K50
	C2453,C2499		CKSRYB103K50
	C2424		CKSRYB473K50
	C2444		CQMBA104J50
RESISTORS			
	R2403		RD1/4MUF121J
	R2401,R2402		RD1/4MUF470J
	Other Resistors		RS1/16S###J
OTHERS			
	2402	7P CABLE HOLDER	51048-0700
	CN2401	8P JUMPER CONNECTOR	52147-0810
	Y2401	BOARD IN JUMPER	ADX7420
	CN2411	7P PLUG	AKP7056
	CN2404,CN2406,CN2412,CN2414	9P PLUG	AKP7057
	CN2405	15P PLUG	AKP7060
	CN2407-CN2409	17P PLUG	AKP7061
	CN2413	19P PLUG	AKP7062
	CN2410	21P PLUG	AKP7063
	CN2403	4P PLUG	KM200TA4
	CN2415	3P SOCKET	KP250NA3
	KN2401-KN2403	EARTH METAL FITTING	VNF1084

AD SP/PS ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	Q4602,Q4603		RN1903
	Q4601		RN4903
	D4601-D4610		1SS355
COILS AND FILTERS			
	L4601-L4607	AF CHOKE COIL	ATH1053
	L4608,L4609	NOISE FILTER	RTF1167
SWITCHES AND RELAYS			
	RY4601-RY4605		ASR7014
CAPACITORS			
⚠	C4621,C4622	(22000u/63V)	ACH7190
	C4623		CEAT101M50
	C4601-C4607		CFTYA104J50
	C4625-C4631		CQMBA103J50
RESISTORS			
⚠	R4621-R4627		RD1/2LMF4R7J
	R4628-R4632		RD1/2VM331J
	R4615,R4616		RD1/4MUF473J
⚠	R4601-R4607		RS1LMF4R7J
⚠	R4611,R4612		RS2LMF331J

Mark	No.	Description	Part No.
		Other Resistors	RS1/16S###J
OTHERS			
	4601	6P CABLE HOLDER	51048-0600
	4602	8P CABLE HOLDER	51048-0800
	Y13	BOARD IN JUMPER	ADX7291
	CN4611	8P SPEAKER TERMINAL	AKE7099
	CN4612	6P SPEAKER TERMINAL	AKE7100
	J4602	JUMPER WIRE 8P	D20PYY0830E
	CN4610,CN4613	5P PLUG	KM200TA5

AE DIODE ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	D2241,D2242		LN6SB60-4003

AF TRANS 2-1 ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC2201,IC2202	PROTECTOR(3.15A)	AEK7016
	Q2202		RN4903
	Q2201		UN521L
⚠	D2201		S1WB(A)60SD
	D2202		UDZS16B
	D2207,D2208		UDZS22B
	D2203-D2206,D2209-D2212		UDZS9.1B
CAPACITORS			
⚠	C2202,C2203	(1u/100v)	ACH1237
	C2207,C2208	(470u/71V)	ACH7193
	C2209,C2210		CEAT101M63
	C2211,C2212		CEAT221M63
RESISTORS			
⚠	R2205,R2206		RS1LMF332J
	Other Resistors		RS1/16S###J
OTHERS			
	2201, 2202	6P CABLE HOLDER	51048-0600
	2203	6P CABLE HOLDER	51052-0600
	H2201-H2204	FUSE CLIP	AKR1004
	J2201	JUMPER WIRE 6P	D20PYY0615E
	J10	JUMPER WIRE	D25PYY0607E

AG VH TR ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	Q2232		2SA1837D1
⚠	Q2231		2SC4793D1
⚠	D2231,D2232		1SR154-400
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	CN2231	6P L TYPE CONNECTOR	KPD6L

AH TRANS 2-2 ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC2251,IC2252	PROTECTOR(3.15A)	AEK7016
⚠	IC2253	PROTECTOR(5A)	AEK7019
CAPACITORS			
	C2251-C2253		CQMBA104J50
RESISTORS			
⚠	R2251,R2252		RD1/4MUF100J
OTHERS			
	2251	7P CABLE HOLDER	51048-0700

AI TRANS 1 ASSY

TRANS 1 Assy has no service parts.

AJ PRIMARY ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC2001		NJM78M56FA
	Q2001		KRC101M
	D2002,D2004,D2005		1SS355
⚠	D2001		S1WB(A)60SD
	D2003		UDZS5.1B
COILS AND FILTERS			
⚠	L2001	LINE FILTER	ATF7018
	L2002,L2003	FERRITE BEAD	VTH1013
TRANSFORMERS			
⚠	T2001		ATT7043
SWITCHES AND RELAYS			
⚠	RY2001		ASR7025
CAPACITORS			
⚠	C2001,C2002	(0.01uF/275V)	ACE7013
⚠	C2003	(10000pF/250V)	ACG7033
	C2008		CEAT102M25
	C2009		CEAT221M25
	C2005-C2007,C2011,C2012		CKSRYB103K50
	C2004		CQMA103J50
RESISTORS			
⚠	R2001	(2.2Mohm/ 1/2W)	RCN1080
	R2002		RD1/2VM101J
	Other Resistors		RS1/16S###J
OTHERS			
	CN2002	11P FFC CONNECTOR	52045-1145
⚠	2004	1P AC OUTLET	AKP1033
	H2001,H2002	FUSE CLIP	AKR7001
	CN2003,CN2004	5P SOCKET	KP200TA5L
⚠	CN2001	AC CORD SOCKET	RKP1751
	2003	SCREW TERMINAL	VNE1948
	KN2001	EARTH METAL FITTING	VNF1084

AK FM/AM TUNER MODULE

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC201		BA1451F
	IC202		LC72131MD
	Q201, Q204, Q205		2SC2412K
	Q202		DTA124ES
	Q203		DTC124EK
	D201		1SS133

Mark No.	Description	Part No.
D202		MTZJ5.1C

COILS AND FILTERS

L201	FM DETECTOR COIL	ATE7003
F202	FM CERAMIC FILTER	ATF-107
F201	FM CERAMIC FILTER	ATF-119
F203	AM CERAMIC FILTER	ATF7026

CAPACITORS

C206	CCSRCH100D50
C212, C213, C226, C233–C235	CCSRCH101J50
C240	CCSRCH101J50
C231, C232	CCSRCH150J50
C223	CEAT100M50
C229	CEAT101M10
C224	CEAT1R0M50
C227	CEAT220M25
C241	CEAT2R2M50
C243	CEAT330M16
C228	CEAT3R3M50
C237	CEAT470M10
C211	CEJA1R0M50
C210	CEJQ470M16
C204, C238, C602	CKSRYB102K50
C101, C102, C208, C220, C239	CKSRYB103K50
C242, C601	CKSRYB103K50
C216, C217, C225	CKSRYB153K50
C201, C205, C209, C214, C230	CKSRYB223K50
C236, C603	CKSRYB223K50
C221	CKSRYB224K10
C202, C222	CKSRYB473K16
C215	CKSRYB681K50

RESISTORS

R211	RD1/4PU221J
R221	RD1/4PU222J
R233	RD1/4PU391J
R243	RS1/10S0R0J
R103	RS1/10S331J
R104	RS1/10S391J
Other Resistors	RS1/16S###J

OTHERS

CN201	13P FFC CONNECTOR	52044-1345
BN201	4P ANTENNA TERMINAL	AKA7003
	SHIELD CASE T	ANK7072
	SHIELD CASE B	ANK7073
X201	CRYSTAL RESONATOR	ASS1093
	(7.2MHz)	
	FM FRONT END	AXF7003
	AM RF TUNING BLOCK	AXX7071

6. ADJUSTMENT

■ AM Tuner Section

• There is no adjustment in the AM tuner.

■ FM Tuner Section

• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

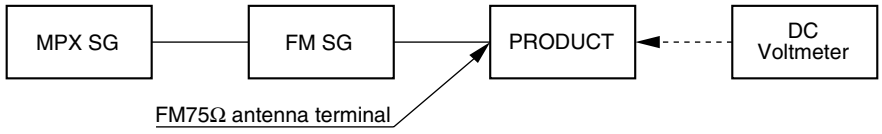


Fig.1 Adjustment Wiring Diagram

AK FM/AM TUNER MODULE

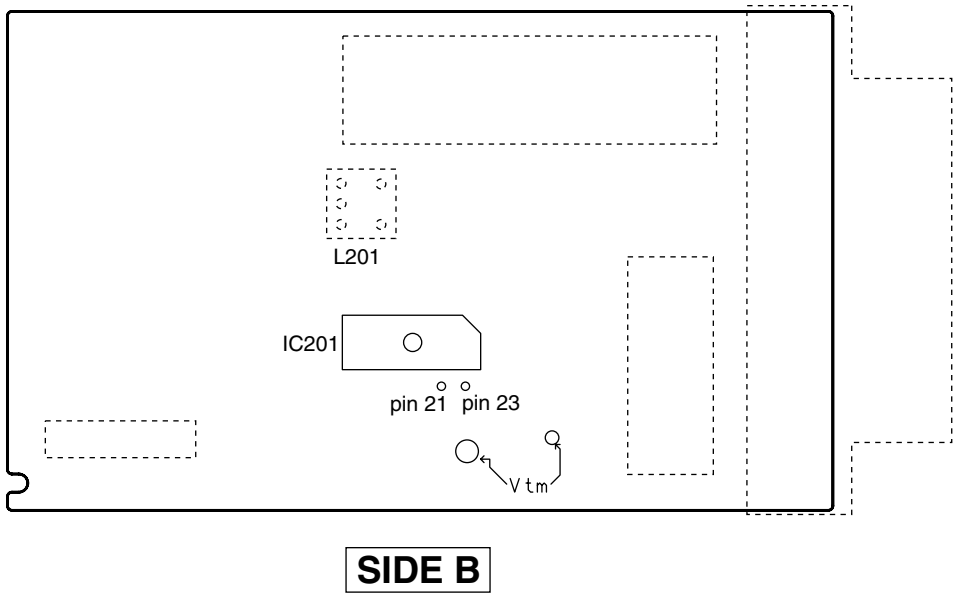


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PROTECTION CIRCUIT CONTROL SPECIFICATION

Microcomputer-related ports

FAN_DRIVE (Expansion IC) : For Fan on/off
TEMP_IN (pin 94)
Input port (A/D) : To detect temperature
FAN_STOP (pin 95)
Input port : To detect Fan forced stop
OL_DET (pin 73)
Input port : To detect overloading at the amplifier (Interrupt port)
DC_DET (pin 63)
Input port : For DC detection

The following control processes are activated immediately before the relay system is turned on upon power-on. The time is 4.8 seconds after power-on. (Control of the relay system is enabled 5.2 seconds after power-on.)
Only DC detection is enabled 2 seconds after power-on to activate it before other protection functions.

① Fan control

1) Fan control

TEMPIN	Temperature (°C)	Fan	Remarks
More than 219	More than 125	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT"
204 to 218	110 to 125	ON	Leading hold
156 to 203	80 to 110	ON	Mute OFF & speaker relay ON : Normal mode
134 to 155	70 to 80	Leading hold	
Less than 133	Less than 70	OFF	

2) Fan detection

If the fan is forcibly stopped, the FAN_DET port becomes "L".
Detecting "L" the microcomputer performs the following operations:
1. System muting on
2. Protection relays off

The warning indication "FAN STOP" appears (flashing) on the FL display.
If this status continues for more than 3 seconds, the power is turned off (for Standby mode).
If the port becomes "H" within 3 seconds, the unit resets automatically.
FAN_DET port performs the chattering check for 1 msec.
In addition, there is the case that detection delays for maximum 20 msec because performs monitor of FAN_DET port with a main loop.

3) Thermistor open detection

If a total (total of 50 times) of A/D value (TEMPIN) for one second is less than 250, the indication "THDCT NG" flashes.
If this status continues for 3 seconds, the power becomes the standby mode.

② Overload detection (abnormality detection)

If the speaker terminals are short-circuited or low-load driving is detected, the OL_DET port becomes "L".
Detecting "L" edge interrupt in an interrupt process, the microcomputer performs the following operations:
1. System muting on
2. Speaker relay off (Control with the display microcomputer)
3. Power off (Standby mode)

③ DC detection (defect detection)

Only DC detection is enabled 2 seconds after power-on.
If there is a fault in the power amplifier or a high-level signal lower than 5 Hz is input, the DC_DET port becomes "L".
Detecting "L" the microcomputer performs the following operations:
1. System muting on
2. Speaker relay off (Control with the display microcomputer)

The warning indication "AMP ERR" appears on the FL display.

If this status continues for more than 3 seconds, the power is turned off (for Standby mode) and flashes the standby LED.
Do not accept the key input afterward.
(Flash it always till turns the primary side off.)
If the port becomes "L" within 3 seconds, the unit resets automatically.

DC_DET port performs the chattering check for 1 msec.
In addition, there is the case that detection delays for maximum 20 msec because performs monitor of DC_DET port with a main loop.
Even if turns the primary side off and turns on once again, standby LED flashes as it is.
If detects DC once and turned the power off, do not accept the key input afterward.
However, power on is possible when the following key was pressed to be able to key input in the protection line and service.
1. Test mode (remote control code : A55F)
2. When the STEREO/DIRECT key and SIGNAL SELECT key are both held pressed for 2 seconds.
(It is effective only when turned the power off with DC detection regarding step 2.)

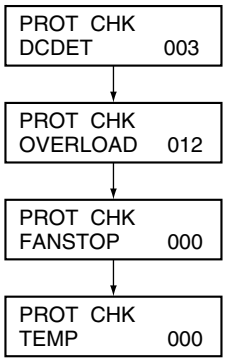
④ Diagnostic mode

This mode is only for servicing and checking the circuit design, and not open to users.
When the STEREO/DIRECT key and TONE + key are both held pressed for 2 seconds in Standby mode, the power is turned on, and the number of times of each defect or Speaker relay off by abnormality detection is sequentially displayed on the FL display.

Displayed items:

- DC detection
- Overload detection
- Fan detection
- Temperature detection

Hold the STEREO/DIRECT key and TONE + key pressed for 2 seconds in Standby mode.



Display changes automatically every 3 seconds.

When the MULTI CH IN key and TONE – key are both held pressed for 2 seconds in standby mode, all clear the counter for detection.

● Protection Process List

Item	Purpose	Detection Method	Process	Warning Indication	Remarks
DC detection	To detect amplifier damage (defect status) A process to protect speakers (for protection of connected external devices)	Detects when the DC_DET port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "AMP ERR" for 3 seconds. Flash the standby LED after the power off.	Once detected and turned the power off, input a key never again.
AMP overload	To detect overloading (abnormal status) With low-load driving or a short circuit of the speaker terminals (for protection of the amplifier)	Detects when the AMP_OL port becomes "L" (checks by interrupt).	Turns muting on and speaker relay off, and immediately turns off the power.	None	
Fan control	Protection function against a temperature rise at the heat sink	Detect temperature more than 100°C.	Turns muting on and speaker relay off. Rotate the fan	Continue flasing with "OVERHEAT"	
		Detect temperature of 90 to 100°C.	Rotate the fan		Mute, relay and warning indications is leading hold.
		Detect temperature of 74 to 90°C.	Rotate the fan		Mute off & relay on (normal mode)
		Detect temperature of 69 to 74°C.	Fan is leading hold		
		A condition except the above.	Stop the fan		
Fan stop	To know that the rotating fan is forcibly stopped	Detects when the FAN_DET port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "FAN STOP" for 3 seconds	If the FAN_DET port becomes "H" within 3 seconds, the unit resets automatically. After the power off, the key input is possible once again.

7.1.2 DIAGNOSTICS OF AMPLIFIER SECTION

When DC detection worked (STBY IND. flashes for a long time) in the protection circuit of foregoing section (or there is not the speaker output, probably only 1CH), failure (damage) of the power amplifier section is considered.

Because this receiver cannot diagnose the amplifier section by an electricity state by structure, please diagnose it in the following steps.

Caution:
When release the STBY (flashes) state before repair, Because there is the case that the damage progresses when turns the power on once again, please be careful.

- According to a symptom, perform the following confirmation beforehand.

1. Are not Fuse and IC protector opening it?
2-a. When can turn on electricity, confirm that supply voltage of the point that can measure is appropriate.
2-b. Furthermore, confirm that voltage ((in a no signal) DC and the appropriate signal output) between GND and R4621-4627 (Either of the amplifier side and the speaker terminal side is possible) (Or remove either of CN4601-4604). And limit failure CH.

If was able to limit failure CH, diagnose the CH in the following steps.

- **Use the tester basically and check that each part is not damaged (resistance value / open / short circuit).**

About parts with damaged possibility, explain FL ch to an example in order.

1. R4131, 4132 (ACN7107: 0.1 Ω, 1W chip drain resistor)
   IC 4102, 4103
   (PBD001A: Nch, PBD002A: Pch output POWER MOS Tr.)

2. R4119 (ACN7111: 0.22 Ω .5W ×2 cement source resistor)
   R4117, 4118
   (RS1/16S471J: 470 Ω chip resistor for protection circuit)
   D4101, 4103
   (UDZS10B: 10V Zener diode for current limiting)
   D4102, 4104 (1SS355: Small signal diodes same as above)
   R4110, 4111 (RS1/16S560J: 56 Ω chip gate resistor)
   R4106, 4107
   (RS1/16S101J:100 Ω chip IC4101 power filter resistor)

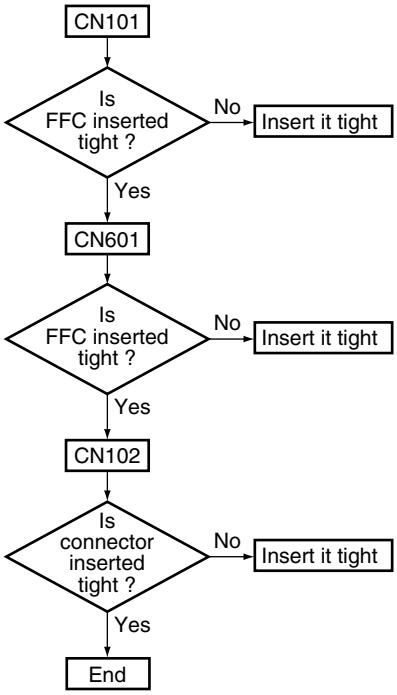
3. IC4101 (PA9009A: Power amplifier with output current bias Voltage step HIC)
   IC4701, 4702
   (AEK7023: 200mA IC protector /FAN CONNECTION Assy)

4. Q2231, 2232 (2SC4793,2SA1837 TO-220 Tr. /VH TR Assy)

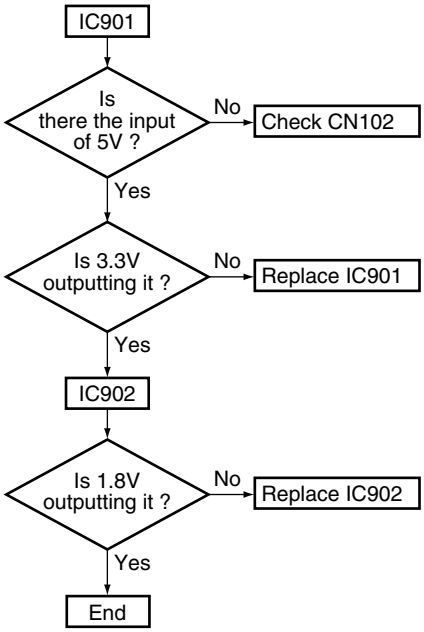
7.1.3 TROUBLE SHOOTING

- When a sound is not out in the surround mode with the digital signal input.
- Suppose CR to be poor contact and that is not damaged.
- This shows failure analysis of DSP Assy.

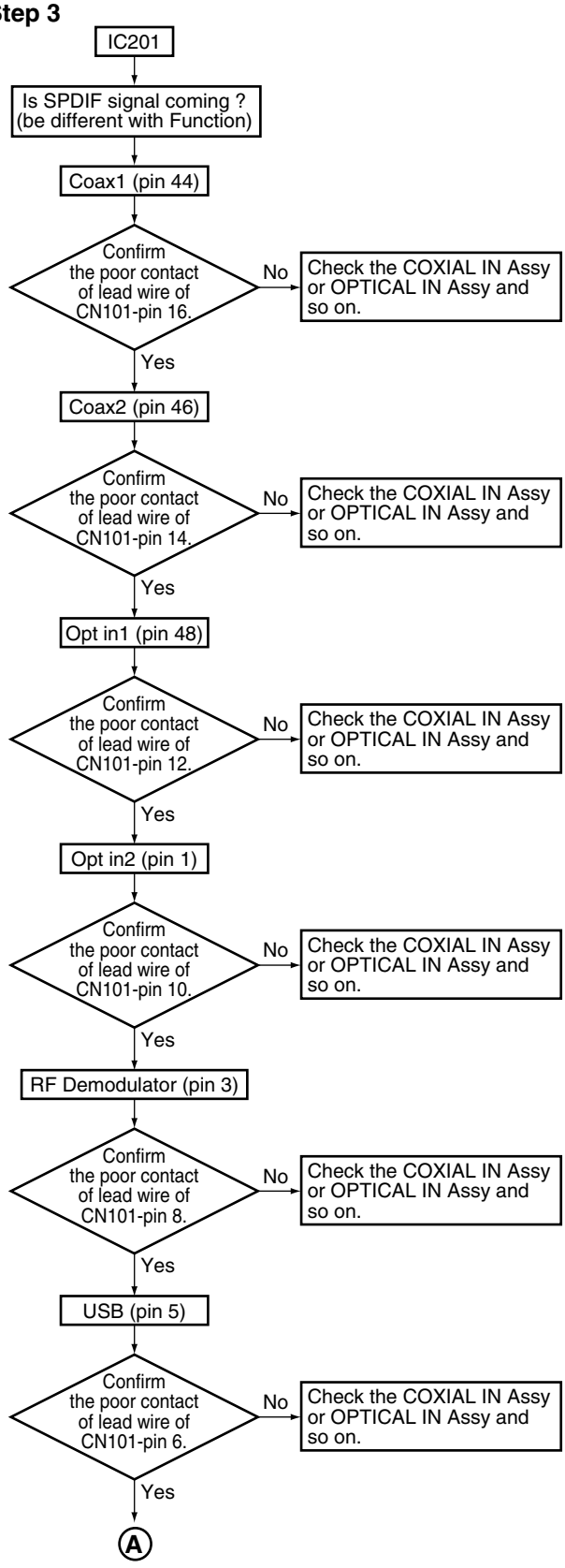
Step 1

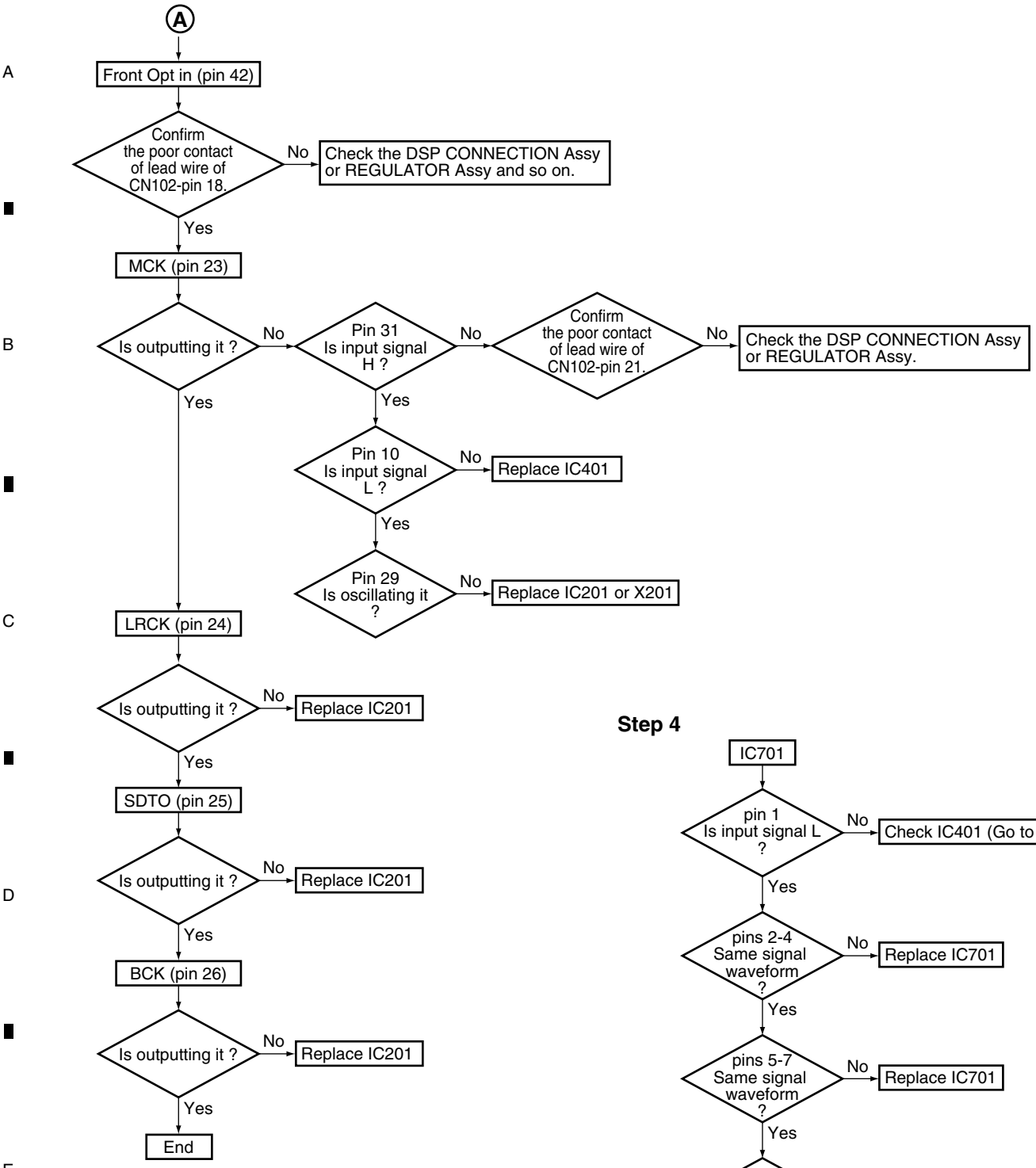


Step 2

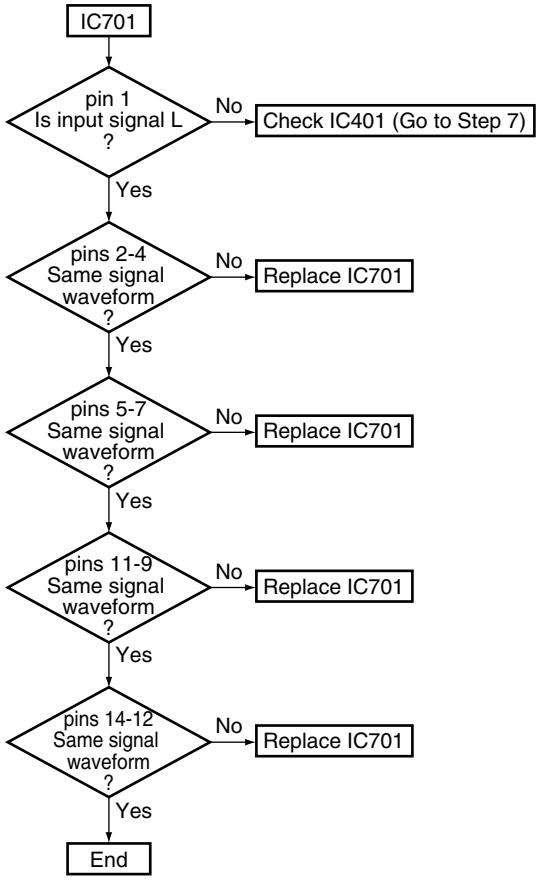


Step 3

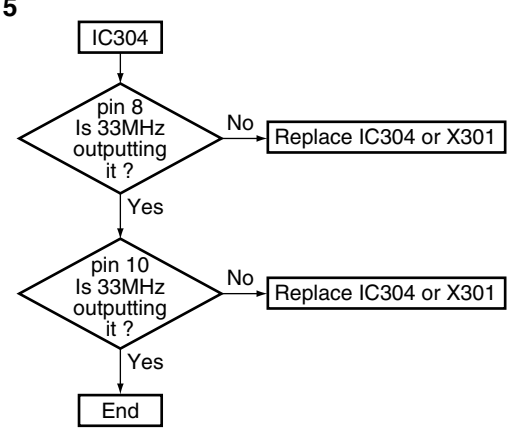

IC201
Is SPDIF signal coming ? (be different with Function)
Coax1 (pin 44)
Confirm the poor contact of lead wire of CN101-pin 16.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Coax2 (pin 46)
Confirm the poor contact of lead wire of CN101-pin 14.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Opt in1 (pin 48)
Confirm the poor contact of lead wire of CN101-pin 12.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
Opt in2 (pin 1)
Confirm the poor contact of lead wire of CN101-pin 10.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
RF Demodulator (pin 3)
Confirm the poor contact of lead wire of CN101-pin 8.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
USB (pin 5)
Confirm the poor contact of lead wire of CN101-pin 6.
No
Check the COXIAL IN Assy or OPTICAL IN Assy and so on.
Yes
A


A
Front Opt in (pin 42)
Confirm the poor contact of lead wire of CN102-pin 18.
No
Check the DSP CONNECTION Assy or REGULATOR Assy and so on.
Yes
MCK (pin 23)
Is outputting it ?
No
Pin 31 Is input signal H ?
No
Confirm the poor contact of lead wire of CN102-pin 21.
No
Check the DSP CONNECTION Assy or REGULATOR Assy.
Yes
Yes
Pin 10 Is input signal L ?
No
Replace IC401
Yes
Pin 29 Is oscillating it ?
No
Replace IC201 or X201
LRCK (pin 24)
Is outputting it ?
No
Replace IC201
Yes
SDTO (pin 25)
Is outputting it ?
No
Replace IC201
Yes
BCK (pin 26)
Is outputting it ?
No
Replace IC201
Yes
End

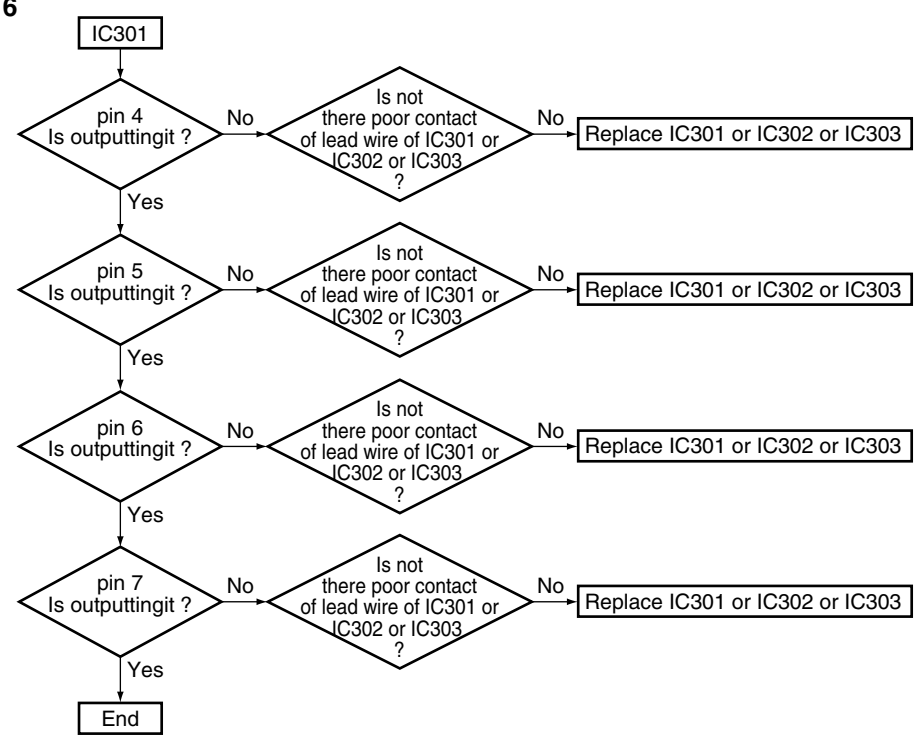
Step 4


IC701
pin 1 Is input signal L ?
No
Check IC401 (Go to Step 7)
Yes
pins 2-4 Same signal waveform ?
No
Replace IC701
Yes
pins 5-7 Same signal waveform ?
No
Replace IC701
Yes
pins 11-9 Same signal waveform ?
No
Replace IC701
Yes
pins 14-12 Same signal waveform ?
No
Replace IC701
Yes
End

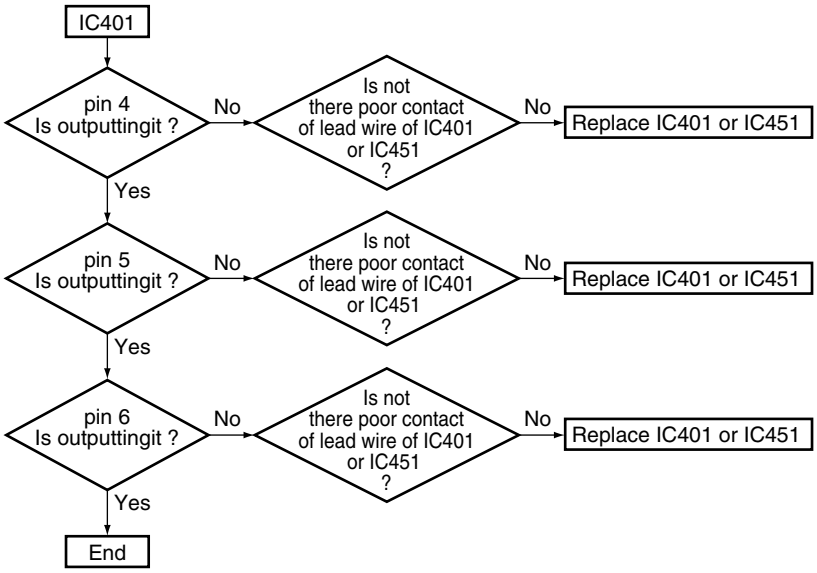
Step 5



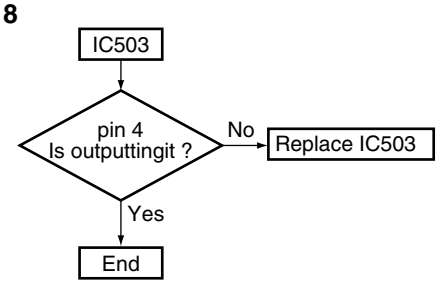
Step 6


IC301
pin 4 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 5 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 6 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
pin 7 Is outputtingit ?
No
Is not there poor contact of lead wire of IC301 or IC302 or IC303 ?
No
Replace IC301 or IC302 or IC303
Yes
End

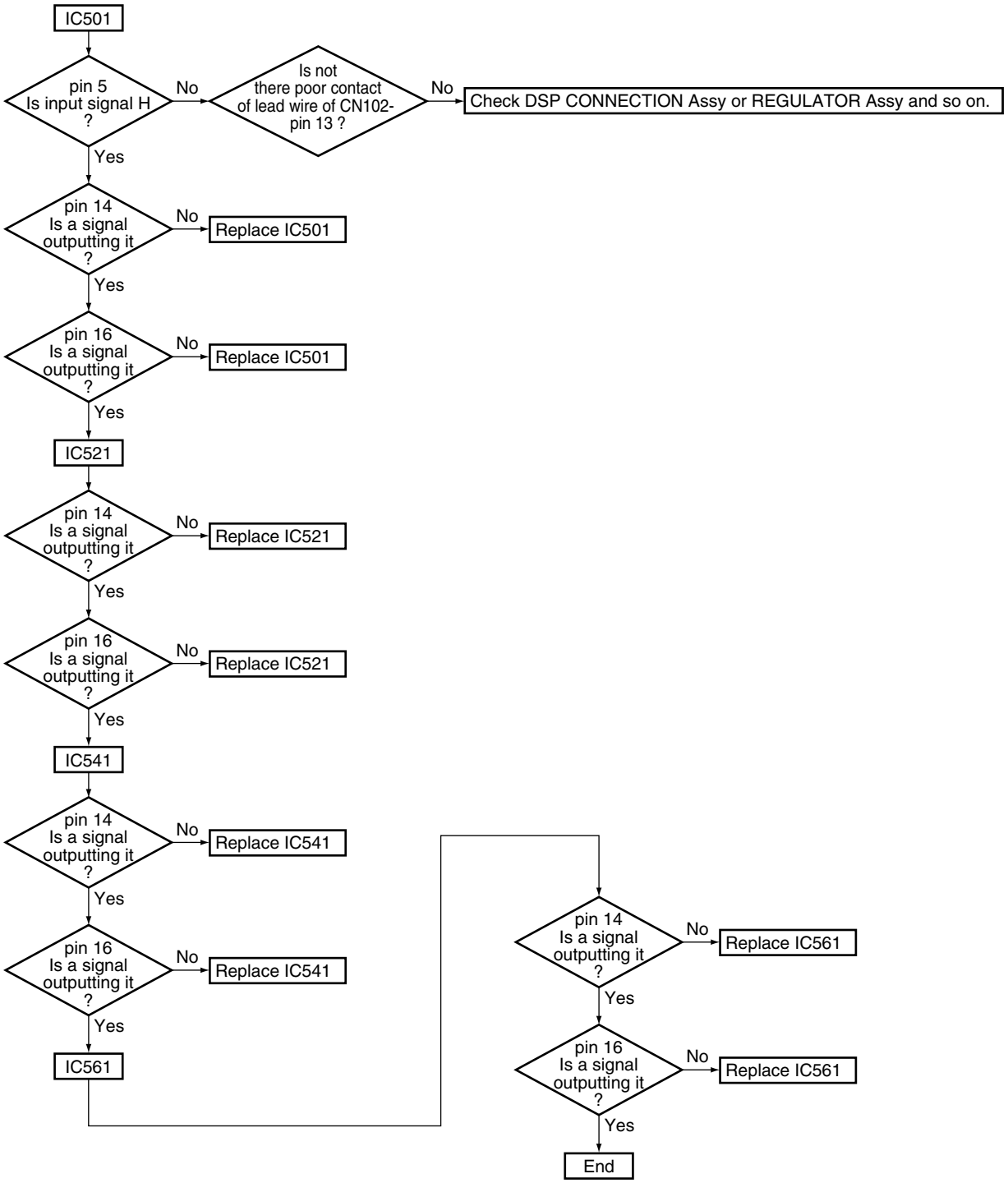
Step 7



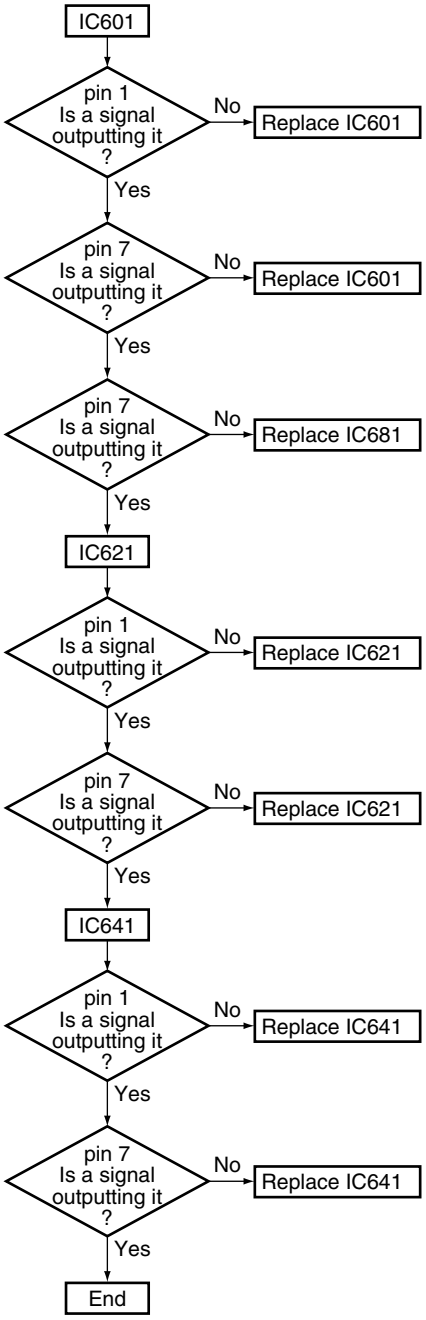
Step 8


IC503
pin 4
Is outputtingit ?
No
Replace IC503
Yes
End

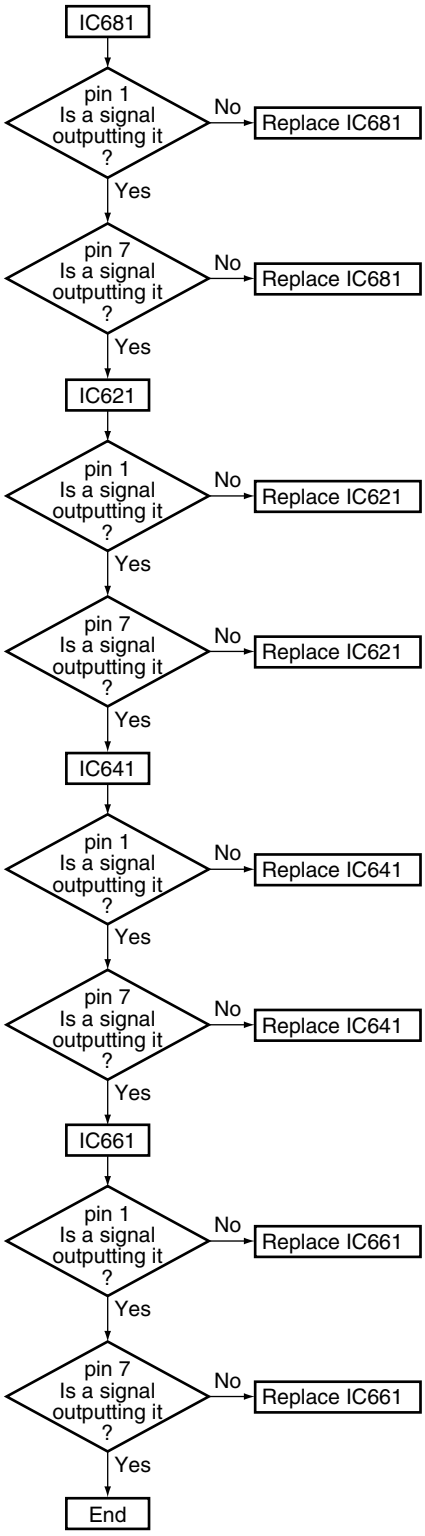
Step 9


IC501
pin 5
Is input signal H
?
No
Is not
there poor contact
of lead wire of CN102-
pin 13 ?
No
Check DSP CONNECTION Assy or REGULATOR Assy and so on.
Yes
pin 14
Is a signal
outputting it
?
No
Replace IC501
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC501
Yes
IC521
pin 14
Is a signal
outputting it
?
No
Replace IC521
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC521
Yes
IC541
pin 14
Is a signal
outputting it
?
No
Replace IC541
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC541
Yes
IC561
pin 14
Is a signal
outputting it
?
No
Replace IC561
Yes
pin 16
Is a signal
outputting it
?
No
Replace IC561
Yes
End

Step 10



Step 11

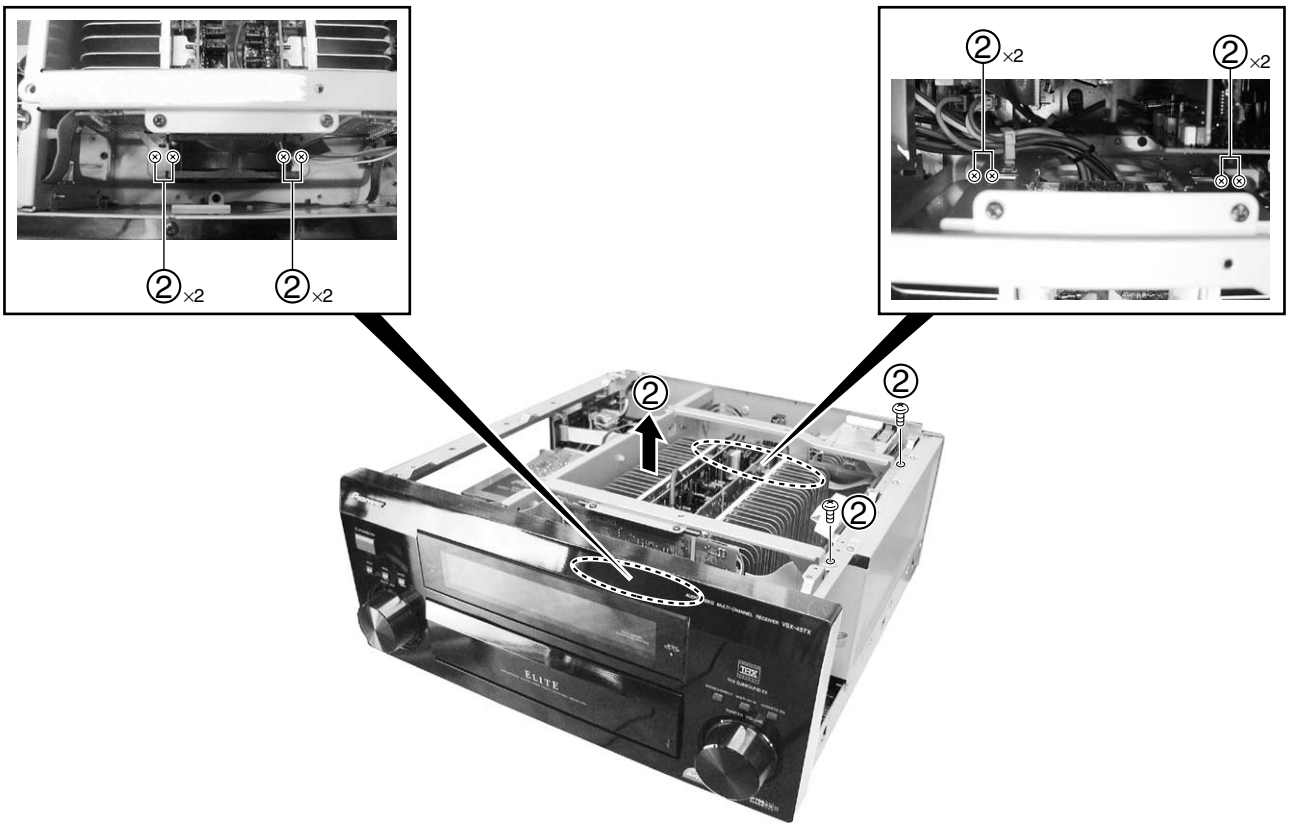


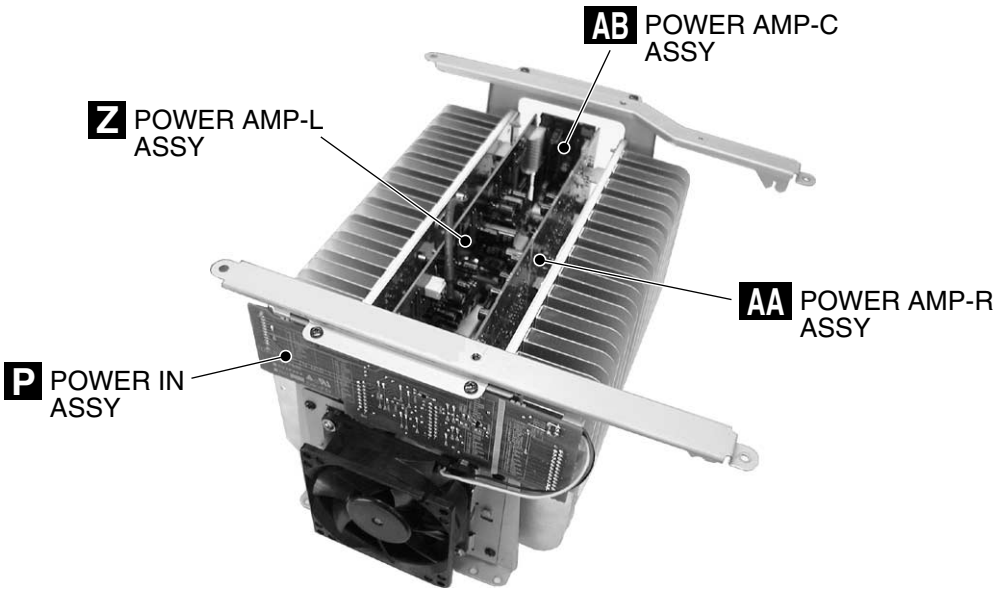
7.1.4 DISASSEMBLY

1 Bonnet and Heat Sink Block

① Remove the bonnet case (screws × 23)

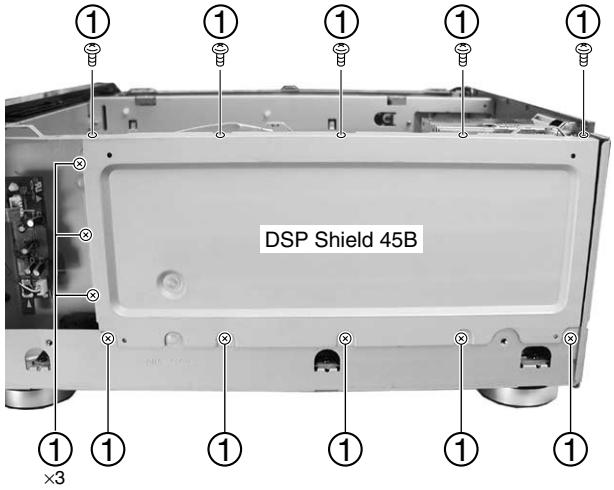
② Remove the heat sink block (screws × 10, connectors × 8)



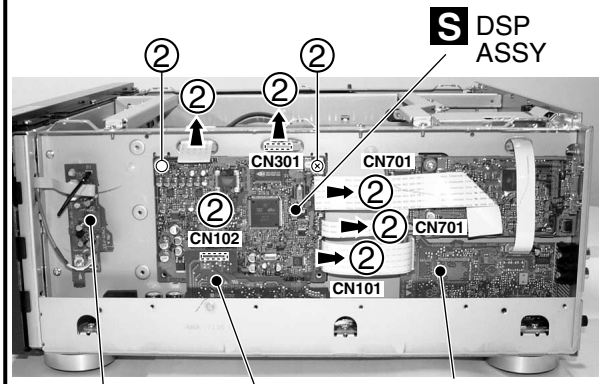


2 DSP Block

① Remove the DSP shield 45B (screws × 13)

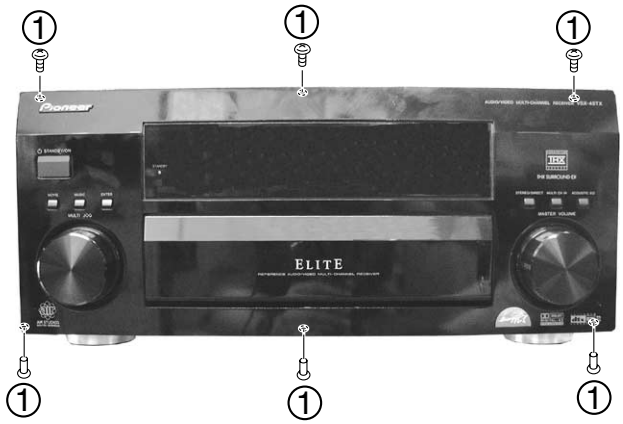


② Remove the DSP ASSY
(screws × 1, Nylon Rivet × 1, connectors × 6)



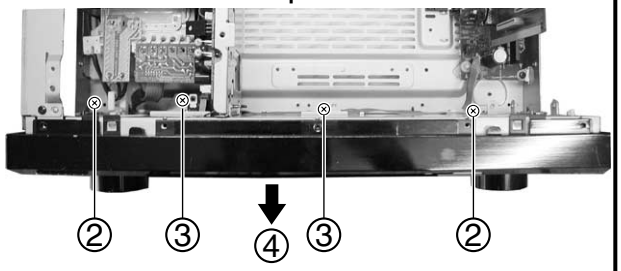
3 Front Panel Block

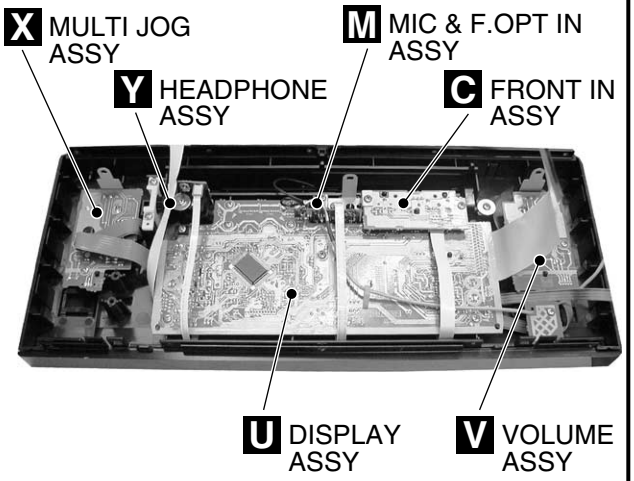
① Remove six screws



② Remove two screws
③ Remove two screws
④ Remove the front panel block

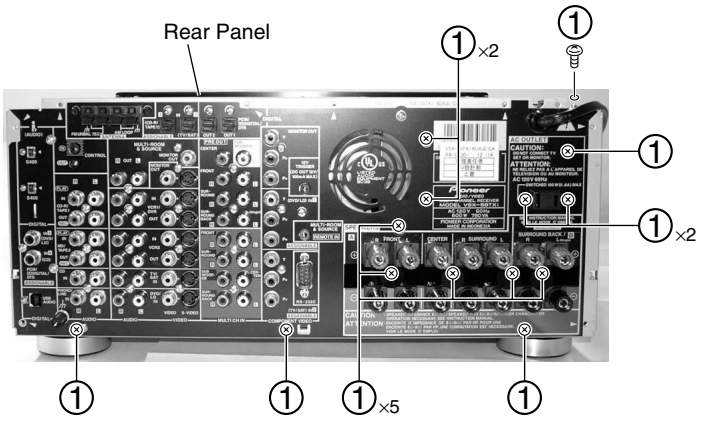
● Top View





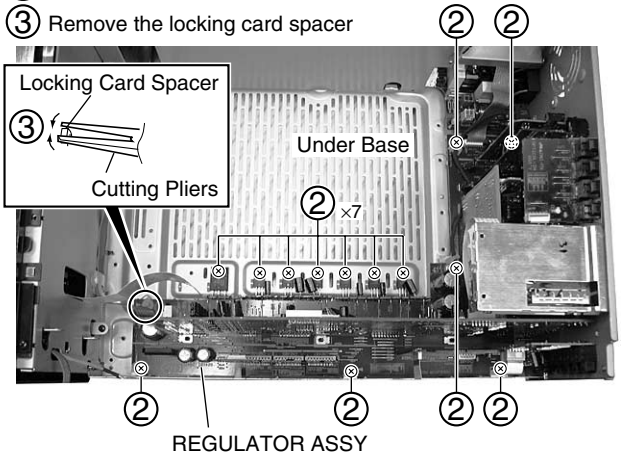
4 Rear Panel Block

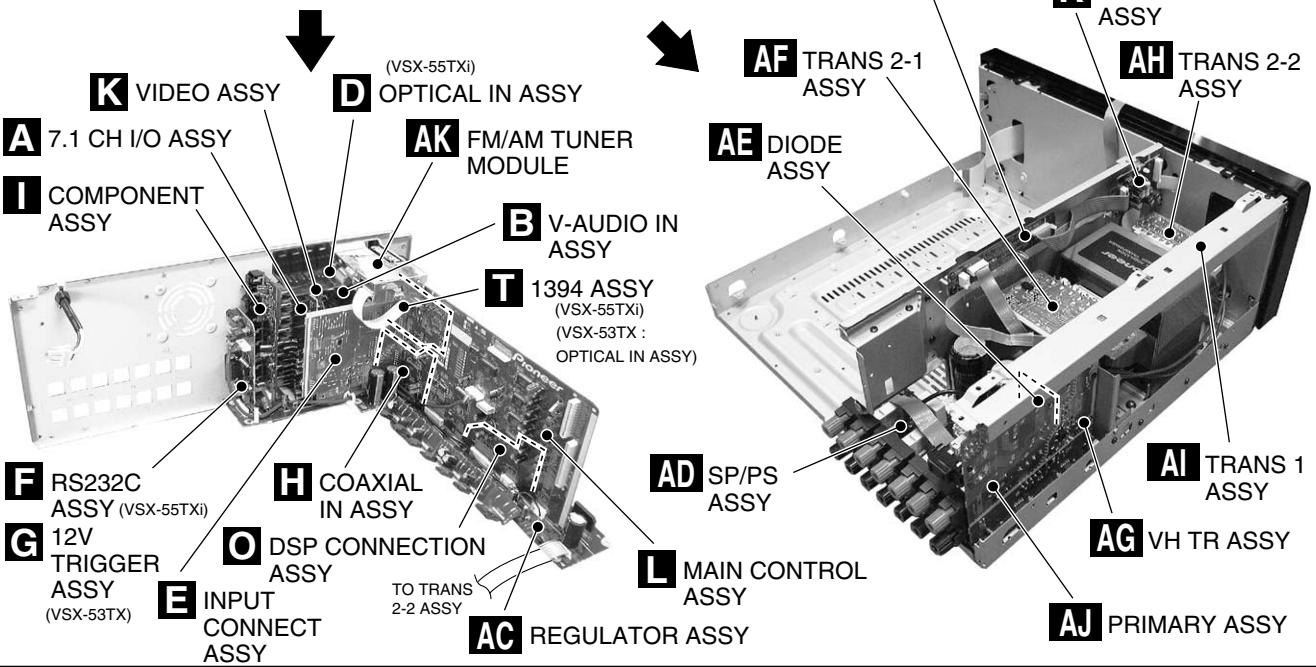
① Remove 14 screws



② Remove 13 screws

③ Remove the locking card spacer




K VIDEO ASSY
D (VSX-55TXi) OPTICAL IN ASSY
A 7.1 CH I/O ASSY
AK FM/AM TUNER MODULE
I COMPONENT ASSY
B V-AUDIO IN ASSY
T 1394 ASSY (VSX-55TXi) (VSX-53TX : OPTICAL IN ASSY)
F RS232C ASSY (VSX-55TXi)
H COAXIAL IN ASSY
G 12V TRIGGER ASSY (VSX-53TX)
O DSP CONNECTION ASSY
E INPUT CONNECT ASSY
TO TRANS 2-2 ASSY
L MAIN CONTROL ASSY
AC REGULATOR ASSY
Q FAN CONNECTION ASSY
R FAN DRIVE ASSY
AF TRANS 2-1 ASSY
AH TRANS 2-2 ASSY
AE DIODE ASSY
AD SP/PS ASSY
AI TRANS 1 ASSY
AG VH TR ASSY
AJ PRIMARY ASSY

7.2 PARTS

7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● **List of IC**

PD8112A, PD5948A8, PD5899A, PD5771B, BU4094BCF

■ PD8112A (1394 ASSY: IC301)

• Flow Control IC

● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	VDDOUT	–	Digital VDD (3.3V)
2	SPDIFOUT	O	IEC60958 output
3	SDATA3O	O	MBLA data output (5 ch, 6 ch) (at flow: I2S)
4	SDATA2O	O	MBLA data output (3 ch, 4 ch) (at flow: I2S)
5	SDATA1O	O	MBLA data output (1 ch, 2 ch) (at flow: I2S)
6	SDATA0O	O	MBLA ancillary data output (at flow: I2S)
7	LRCKOUT	O	MBLA LRCK output
8	BCKOUT	O	MBLA BCK output (64fs)
9	AMCLKOUT	O	Master clock output (When AMCLKEN output is LOW, active Hi-Z.)
10	AMCLKEN	O	When 60958 is selected or OUTPUTEN=L output, active LOW. For external clock control
11	SDERRO	O	Data error flag output
12	VSSOUT	–	Digital GND
13	VDDOUT	–	Digital VDD (3.3V)
14	SDMUTEO	O	Data mute flag output MUTE: H
15	SAPCMBCKIN	I	BCK input when converting SACD to MLPCM
16	SAPCMLRCKIN	I	LRCK input when converting SACD to MLPCM
17	SAPCMD3IN	I	DATA3 input when converting SACD to MLPCM
18	SAPCMD2IN	I	DATA2 input when converting SACD to MLPCM
19	SAPCMD1IN	I	DATA1 input when converting SACD to MLPCM
20	SACDMKO	O	SACD master clock output (2.8224MHz)
21	SACDDAO	O	SACD ancillary data output
22	SACDD0O	O	SACD data output (L)
23	SACDD1O	O	SACD data output (R)
24	SACDD2O	O	SACD data output (C)
25	SACDD3O	O	SACD data output (Lfe)
26	VSSCORE	–	Digital GND (for inside)
27	VDDCORE	–	Digital VDD (3.3V, for inside)
28	SACDD4O	O	SACD data output (Ls)
29	SACDD5O	O	SACD data output (Rs)
30	SACDFRO	O	SACD frame data output (75Hz)
31	TESTMODE0	I	LSI test mode input Normally, "L" fixed
32	TESTMODE1	I	LSI test mode input Normally, "L" fixed
33	PLLMODE	I	VCOCLK division ratio selection Normally, "L"
34	SAPCMMODE	I	0: normal, 1: When the data type is SACD, output SAPCM*** input to MLPCM.
35	XVALMODE	I	0: 64M•128M bit SDRAM, 1: 256M bit SDRAM
36	RJMSBF	I	MLPCM output format setting at flow 0: I2S, 1: Right aligned MSB first
37	SEL512	I	Master clock selection at flow 0: 768fs, 1: 512fs
38	CONT48	O	Output for controlling the oscillator (When FMODE="1" and SEL44K="1", active High)
39	CLK48K	I	Master clock input of fs48kHz (36.864MHz or 24.576MHz)
40	CLK48KI	I	Crystal resonator input of fs48kHz (24.576MHz)
41	CLK48KO	O	Crystal resonator output of fs48kHz (24.576MHz)
42	VSSOUT	–	Digital GND
43	VDDOUT	–	Digital VDD (3.3V)
44	CONT44	O	Output for controlling the oscillator (When FMODE="1" and SEL44K="0", active High)
45	CLK44K	I	Master clock input of fs44.1kHz (33.8688MHz or 22.5792MHz)
46	CLK44KI	I	Crystal resonator input of fs44.1kHz (22.5792MHz)
47	CLK44KO	O	Crystal resonator output of fs44.1kHz (22.5792MHz)
48	SELOSC	I	L: CLK4XK input selection, H: crystal resonator I/O selection As for the crystal resonator, less than 30MHz are insured.

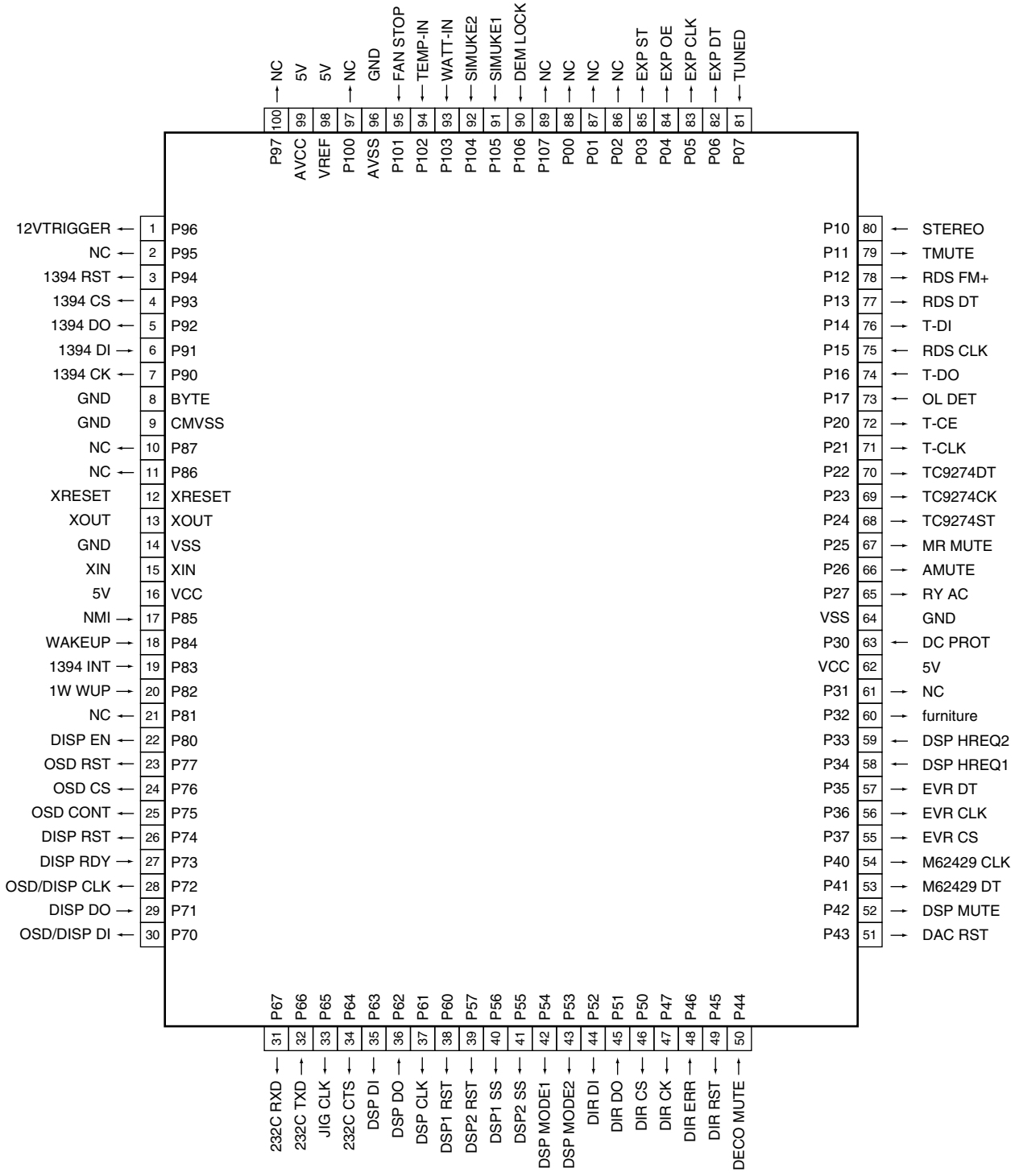
No.	Pin Name	I/O	Function
49	XRESET	I	Logic reset input Reset for L
50	OUTPUTEN	I	Pin for controlling the audio system output H: output, L: Hi-Z
51	FMODE	I	Flow mode control input at flow: H, at through: L
52	SELDTYPE0	I	Data type input 0 00: IEC60958, 01: MBLA
53	SELDTYPE1	I	Data type input 1 1X: SACD
54	SEL44K	I	Selecting signal of master clock input at flow L: CLK48K, H: CLK44K
55	FSSEL0	I	fs setting input 0 00: 44.1/48kHz, 01: 88.2/96kHz
56	FSSEL1	I	fs setting input 1 10: 176.4/192kHz, 11: 29.4/32kHz
57	VSSOUT	–	Digital GND
58	VDDOUT	–	Digital VDD (3.3V)
59	RXSTART	I	Trigger signal input of flow receiving start
60	SACDCHSEL	I	In a through mode, set to 1 in SACD 5 channel receiving. 0: 2ch•6 ch, 1: In 5ch flow receiving, a channel is distinguished automatically by ansillary data.
61	FMUTE	I	Forced mute control signal input Reflect to SDMUTEO.
62	FSTATE0	O	Status output 0 of memory in the flow
63	FSTATE1	O	Status output 1 of memory in the flow 00: Empty < 01: fast < 11: standard < 10: slow • full
64	FSTATE2	O	Status output 2 of flow receive data When received data type to be different from the set data type,active High.
65	TDI	I	Boundary Scan TAP pin
66	TDO	O	Boundary Scan TAP pin
67	TMS	I	Boundary Scan TAP pin
68	TCK	I	Boundary Scan TAP pin
69	TRST	I	Boundary Scan TAP pin
70	SACDMKIN	I	SACD bit clock input
71	SACDFRIN	I	SACD frame signal input
72	SACDD0IN	I	SACD data input 0 (ch1)
73	VSSCORE	–	Digital GND (for inside)
74	VDDCORE	–	Digital VDD (3.3V, for inside)
75	SACDD1IN	I	SACD data input 1 (ch2)
76	SACDD2IN	I	SACD data input 2 (ch3)
77	SACDD3IN	I	SACD data input 3 (ch4)
78	SACDD4IN	I	SACD data input 4 (ch5)
79	SACDD5IN	I	SACD data input 5 (ch6)
80	SACDDAIN	I	SACD ansillary data input
81	AMCLKIN	I	Master clock input (VCO) at through mode
82	SPDIFIN	I	IEC60958 input Data valid input at flow
83	SDMUTEIN	I	Mute flag input at through mode
84	SDERRIN	I	Data error flag input
85	VCOCLK2O	O	VCO clock output 2 (for 512fs)
86	VCOCLK1O	O	VCO clock output 1 (for 768fs)
87	REFSYT	I	PLL reference input (at passive filter)
88	DIVVCO	I	PLL VCO dividing input (at passive filter)
89	VCOEN	I	Built-in VCO control input Low: stop, High: oscillation
90	VSSCORE	–	Digital GND (for inside)
91	VDDCORE	–	Digital VDD (3.3V, for inside)
92	VSSOUT	–	Connect to analog GND
93	VSSPASS	–	Analog GND
94	VDDPASS	–	Analog VDD (3.3V)
95	LPOUT	O	Phase comparator output (analog)
96	LPIN	I	VCO control voltage input (analog)

No.	Pin Name	I/O	Function
97	VDDOUT	–	Connect to analog VDD (3.3V)
98	BCKIN	I	MBLA flow BCK input
99	LRCKIN	I	MBLA flow LRCK input
100	SDATA1IN	I	MBLA flow data input 1
101	SDATA2IN	I	MBLA flow data input 2
102	SDATA3IN	I	MBLA flow data input 3
103	SDATA0IN	I	MBLA flow data input 0
104	VSSOUT	–	Digital GND
105	VDDOUT	–	Digital VDD (3.3V)
106	SDA0	O	Address output for external SDRAM
107	SDA1	O	Address output for external SDRAM
108	SDA2	O	Address output for external SDRAM
109	SDA3	O	Address output for external SDRAM
110	SDA4	O	Address output for external SDRAM
111	SDA5	O	Address output for external SDRAM
112	SDA6	O	Address output for external SDRAM
113	SDA7	O	Address output for external SDRAM
114	SDA8	O	Address output for external SDRAM
115	SDA9	O	Address output for external SDRAM
116	SDA10	O	Address output for external SDRAM
117	SDA11	O	Address output for external SDRAM
118	SDA12	O	Address output for external SDRAM
119	SDA13	O	Address output for external SDRAM
120	SDD0	I/O	Data input/output for external SDRAM
121	SDD1	I/O	Data input/output for external SDRAM
122	SDD2	I/O	Data input/output for external SDRAM
123	SDD3	I/O	Data input/output for external SDRAM
124	SDD4	I/O	Data input/output for external SDRAM
125	SDD5	I/O	Data input/output for external SDRAM
126	SDD6	I/O	Data input/output for external SDRAM
127	SDD7	I/O	Data input/output for external SDRAM
128	VSSOUT	–	Digital GND
129	VDDOUT	–	Digital VDD (3.3V)
130	SDD8	I/O	Data input/output for external SDRAM
131	SDD9	I/O	Data input/output for external SDRAM
132	SDD10	I/O	Data input/output for external SDRAM
133	SDD11	I/O	Data input/output for external SDRAM
134	SDD12	I/O	Data input/output for external SDRAM
135	SDD13	I/O	Data input/output for external SDRAM
136	SDD14	I/O	Data input/output for external SDRAM
137	SDD15	I/O	Data input/output for external SDRAM
138	SDCKE	I/O	Data input/output for external SDRAM
139	SDCLK	O	Data input/output for external SDRAM
140	SDDQMU	O	Data input/output for external SDRAM
141	SDXRAS	O	XRAS output for external SDRAM
142	SDXCAS	O	XCAS output for external SDRAM
143	SDXWE	O	XWE output for external SDRAM
144	VSSOUT	–	Digital GND

■ PD5948A8 (MAIN CONTROL ASSY: IC501) (For VSX-55TXi)

• Main Microcomputer

● **Pin Assignment (Top view)**



● Pin Function

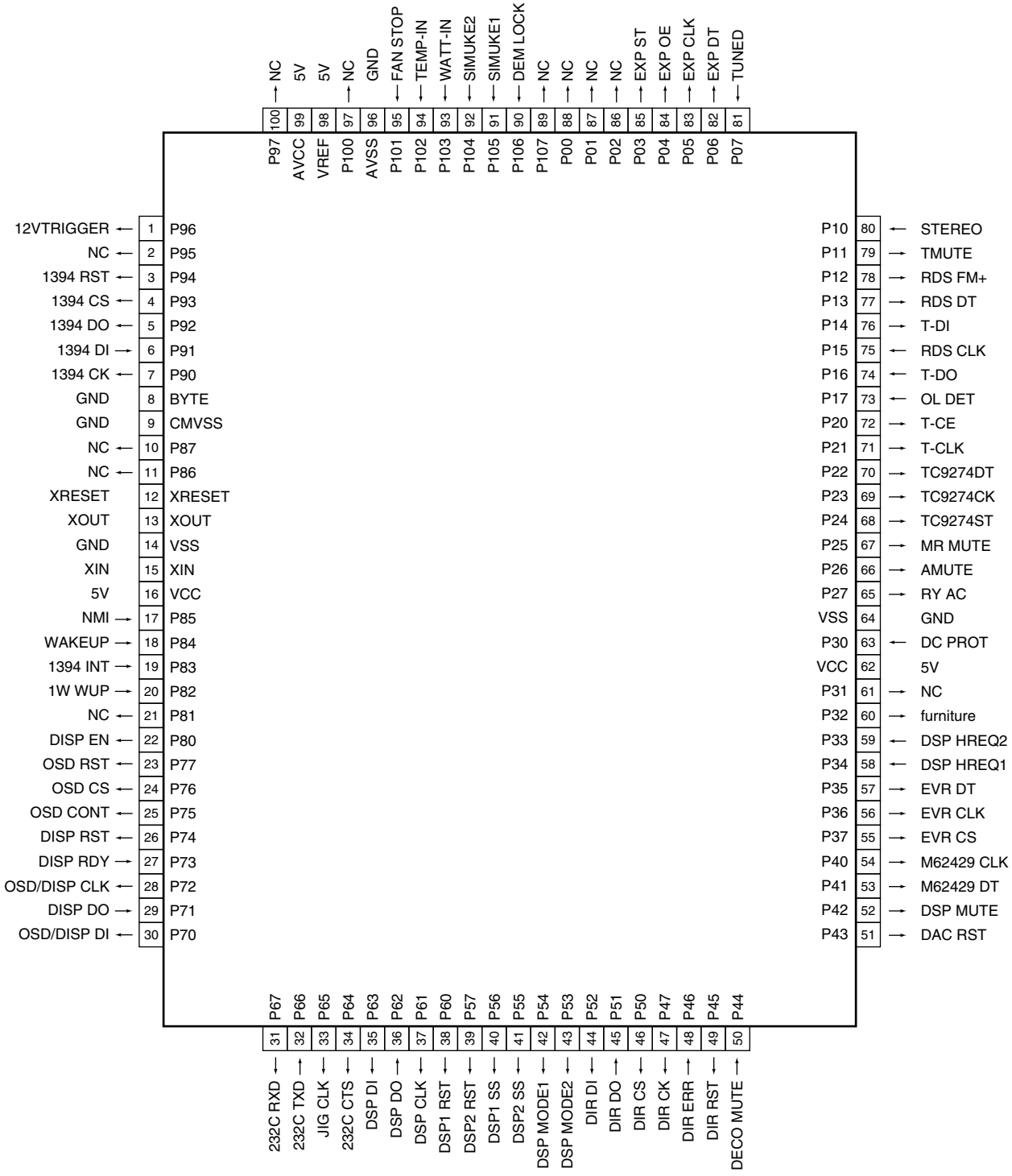
No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at ON	
2	–	O	NC "L" fixed.	
3	1394 RST	O	Reset for 1394	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DO	O	DO for 1394	
6	1394 DI	I	DI for 1394	
7	1394 CK	O	CK for 1394	
8	GND	–	Ground	
9	CNVSS	–	5.1kΩ pulldown	
10	–	O	L" fixed	
11	–	O	L" fixed	
12	XRESET	–	Reset	
13	XOUT	–	Oscillator	
14	GND	–	Ground	
15	XIN	–	Oscillator	
16	5V	–	5V power supply	
17	NMI	I	Cannot use it as usual input port (100kΩ pullup)	
18	WAKEUP	I	Wakeup	H
19	1394 INT	I	INT for 1394	
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	–	O	L" fixed	
22	DISP EN	O	Communication enabling signal to the display microcomputer	H
23	OSD RST	O	OSD-IC reset signal L: reset, H: release reset	
24	OSD CS	O	OSD-IC chip select signal	H
25	OSD CONT.	O	At data transfer to the OSD-IC: "H"	
26	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	
27	DISP RDY	I	Communication enabling signal from the display microcomputer	H
28	OSD/DISP CLK	O	Communication clock signal with the OSD-IC/display microcomputer	
29	DISP DO	I	Communication data in signal with the display microcomputer (N ch open drain)	
30	OSD/DISP DI	O	Communication data out signal with the OSD-IC/display microcomputer (N ch open drain: pullup)	
31	232C RXD	O	For 232C rewriting (data output)	
32	232C TXD	I	For 232C rewriting (data input)	
33	CLK	O	Not used	
34	232C CTS	O	For 232C rewriting (communication permission)	
35	DSP DI	O	Communication data out signal with the DSP1 microcomputer	
36	DSP DO	I	Communication data in signal with the DSP2 microcomputer	
37	DSP CLK	O	Communication clock signal with the DSP microcomputer	
38	DSP1 RST	O	DSP1 microcomputer reset signal L: reset, H: release reset	
39	DSP2 RST	O	DSP2 microcomputer reset signal L: reset, H: release reset	
40	DSP1 SS	O	Slave select signal to DSP1 microcomputer	L
41	DSP2 SS	O	Slave select signal to DSP2 microcomputer	L
42	DSP MODE1	O	Mode selection of DSP1 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
43	DSP MODE2	O	Mode selection of DSP2 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
44	DIR DI	O	Communication data out signal with the DIR	
45	DIR DO	I	Communication data in signal with the DIR/DAC	
46	DIR CS	O	Communication chip select signal with the DIR/DAC	
47	DIR CK	O	Communication clock signal with the DIR/DAC	
48	DIR ERR	I	Lock/Unlock signal	
49	DIR RST	O	DIR reset signal	
50	DECO MUTE	I	Boot success detecting port of 1st DSP	

No.	Pin Name	I/O	Pin Function	Active
51	DAC RST	O	DAC/AD reset	
52	DSP MUTE	O	DSP Assy mute	H
53	M62429 DT	O	Data signal for multi room volume IC control	
54	M62429 CLK	O	Clock signal for multi room volume IC control	
55	EVR CS	O	Chip select signal for erectronic volume	
56	EVR CLK	O	Clock signal for erectronic volume	
57	EVR DT	O	Data signal for erectronic volume	
58	DSP HREQ1	I	Error detection signal of DSP1 microcomputer	
59	DSP HREQ2	I	Error detection signal of DSP2 microcomputer	
60	furniture	O	Furniture control signal	
61	–	O	L" fixed	
62	5V	–	5V power supply	
63	DC PROT	I	DC detection L: Detection	L
64	GND	–	Ground	
65	RC-AC	O	AC relay ON/OFF	H
66	AMUTE	O	System mute L: Mute ON	L
67	MRMUTE	O	Multi room mute L: Mute ON	L
68	tc9274f-st	O	Function SW control (Strobe)	
69	tc9274f-ck	O	Function SW control (Clock)	
70	tc9274f-dt	O	Function SW control (Data)	
71	TUNER CLK	O	Clock signal of tuner control	
72	TUNER CE	O	Chip select signal of tuner control	
73	OL DET	I	Amp. overload detection L: Detection	L
74	TUNER DO	I	Data input signal of tuner control (pullup)	
75	RDS CLK	O	L" fixed	
76	TUNER DI	O	Data output signal of tuner control	
77	RDS DT	O	L" fixed	
78	RDS FM+	O	L" fixed	
79	TMUTE	O	Tuner mute	H
80	STEREO	I	L: STEREO (pullup)	L
81	TUNED	I	L: TUNED (pullup)	L
82	EXP DT	O	Data signal of expansion IC control	
83	EXP CLK	O	Clock signal of expansion IC control	
84	EXP OE	O	Output enable signal of expansion IC control	
85	EXP ST	O	Chip clock signal of expansion IC control	
86	–	O	NC	
87	–	O	NC	
88	–	O	NC	
89	–	O	NC	
90	DEM LOCK	I	Not used	
91	SIMUKE1	I	Destination read 1	
92	SIMUKE2	I	Destination read 2	
93	WATT-IN	I	Wattage detection Level detection with A/D	A/D
94	TEMP-IN	I	Temperature detection Level detection with A/D	A/D
95	FAN STOP	I	Fan forced stop detection	H
96	AVSS	–	Connect to VSS	
97	–	O	NC	L
98	VREF	–	Connect to VCC	
99	AVCC	–	Connect to VCC	
100	–	O	NC	

■ PD5899A (MAIN CONTROL ASSY: IC501) (For VSX-53TX)

• Main Microcomputer

● Pin Assignment (Top view)



● Pin Function

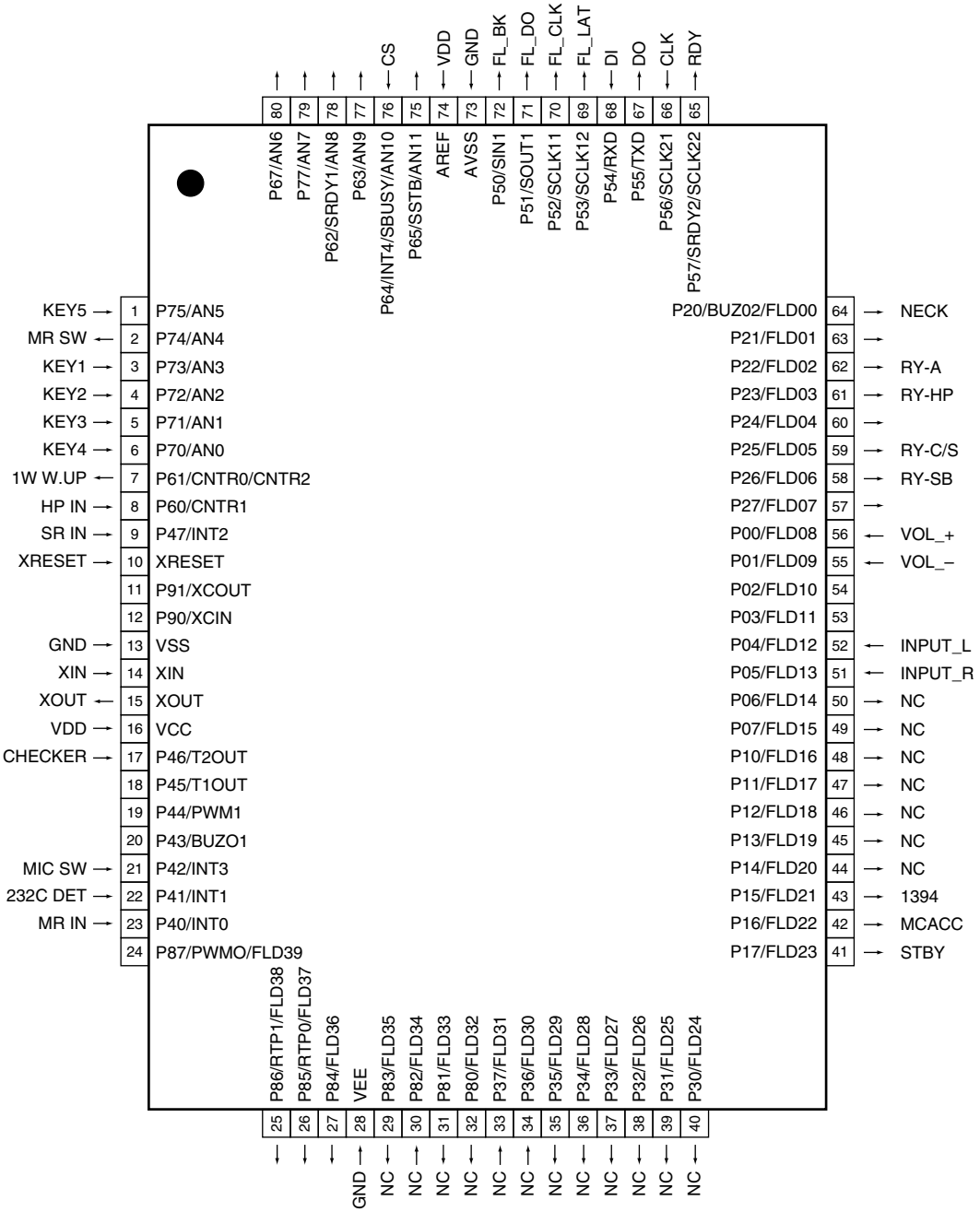
No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at ON	
2	–	O	NC "L" fixed.	
3	1394 RST	O	RST for 1394 (Not used) "L" fixed.	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DO	O	DO for 1394 (Not used) "L" fixed.	
6	1394 DI	I	DI for 1394 (Not used) Standby with the circuit.	
7	1394 CK	O	CLK for 1394 (Not used) "L" fixed.	
8	GND	–	Ground	
9	CNVSS	–	5.1kΩ pulldown	
10	–	O	L" fixed	
11	–	O	L" fixed	
12	XRESET	–	Reset	
13	XOUT	–	Oscillator	
14	GND	–	Ground	
15	XIN	–	Oscillator	
16	5V	–	5V power supply	
17	NMI	I	Cannot use it as usual input port (100kΩ pullup)	
18	WAKEUP	I	Wakeup	H
19	1394 INT	I	INT for 1394 (Not used) Standby with the circuit.	
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	–	O	L" fixed	
22	DISP EN	O	Communication enabling signal to the display microcomputer	H
23	OSD RST	O	OSD-IC reset signal L: reset, H: release reset	
24	OSD CS	O	OSD-IC chip select signal	H
25	OSD CONT.	O	At data transfer to the OSD-IC: "H"	
26	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	
27	DISP RDY	I	Communication enabling signal from the display microcomputer	H
28	OSD/DISP CLK	O	Communication clock signal with the OSD-IC/display microcomputer	
29	DISP DO	I	Communication data in signal with the display microcomputer (N ch open drain)	
30	OSD/DISP DI	O	Communication data out signal with the OSD-IC/display microcomputer (N ch open drain: pullup)	
31	232C RXD	O	For 232C rewriting (data output)	
32	232C TXD	I	For 232C rewriting (data input)	
33	CLK	O	Not used	
34	232C CTS	O	For 232C rewriting (communication permission)	
35	DSP DI	O	Communication data out signal with the DSP1 microcomputer	
36	DSP DO	I	Communication data in signal with the DSP2 microcomputer	
37	DSP CLK	O	Communication clock signal with the DSP microcomputer	
38	DSP1 RST	O	DSP1 microcomputer reset signal L: reset, H: release reset	
39	DSP2 RST	O	DSP2 microcomputer reset signal L: reset, H: release reset	
40	DSP1 SS	O	Slave select signal to DSP1 microcomputer	L
41	DSP2 SS	O	Slave select signal to DSP2 microcomputer	L
42	DSP MODE1	O	Mode selection of DSP1 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
43	DSP MODE2	O	Mode selection of DSP2 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
44	DIR DI	O	Communication data out signal with the DIR	
45	DIR DO	I	Communication data in signal with the DIR/DAC	
46	DIR CS	O	Communication chip select signal with the DIR/DAC	
47	DIR CK	O	Communication clock signal with the DIR/DAC	
48	DIR ERR	I	Lock/Unlock signal	
49	DIR RST	O	DIR reset signal	
50	DECO MUTE	I	Boot success detecting port of 1st DSP	

No.	Pin Name	I/O	Pin Function	Active
51	DAC RST	O	DAC/AD reset	
52	DSP MUTE	O	DSP Assy mute	H
53	M62429 DT	O	Data signal for multi room volume IC control	
54	M62429 CLK	O	Clock signal for multi room volume IC control	
55	EVR CS	O	Chip select signal for erectronic volume	
56	EVR CLK	O	Clock signal for erectronic volume	
57	EVR DT	O	Data signal for erectronic volume	
58	DSP HREQ1	I	Error detection signal of DSP1 microcomputer	
59	DSP HREQ2	I	Error detection signal of DSP2 microcomputer	
60	furniture	O	Furniture control signal	
61	–	O	L" fixed	
62	5V	–	5V power supply	
63	DC PROT	I	DC detection L: Detection	L
64	GND	–	Ground	
65	RC-AC	O	AC relay ON/OFF	H
66	AMUTE	O	System mute L: Mute ON	L
67	MRMUTE	O	Multi room mute L: Mute ON	L
68	tc9274f-st	O	Function SW control (Strobe)	
69	tc9274f-ck	O	Function SW control (Clock)	
70	tc9274f-dt	O	Function SW control (Data)	
71	TUNER CLK	O	Clock signal of tuner control	
72	TUNER CE	O	Chip select signal of tuner control	
73	OL DET	I	Amp. overload detection L: Detection	L
74	TUNER DO	I	Data input signal of tuner control (pullup)	
75	RDS CLK	O	L" fixed	
76	TUNER DI	O	Data output signal of tuner control	
77	RDS DT	O	L" fixed	
78	RDS FM+	O	L" fixed	
79	TMUTE	O	Tuner mute	H
80	STEREO	I	L: STEREO (pullup)	L
81	TUNED	I	L: TUNED (pullup)	L
82	EXP DT	O	Data signal of expansion IC control	
83	EXP CLK	O	Clock signal of expansion IC control	
84	EXP OE	O	Output enable signal of expansion IC control	
85	EXP ST	O	Chip clock signal of expansion IC control	
86	–	O	NC	
87	–	O	NC	
88	–	O	NC	
89	–	O	NC	
90	DEM LOCK	I	Not used	
91	SIMUKE1	I	Destination read 1	
92	SIMUKE2	I	Destination read 2	
93	WATT-IN	I	Wattage detection Level detection with A/D	A/D
94	TEMP-IN	I	Temperature detection Level detection with A/D	A/D
95	FAN STOP	I	Fan forced stop detection	H
96	AVSS	–	Connect to VSS	
97	–	O	NC	L
98	VREF	–	Connect to VCC	
99	AVCC	–	Connect to VCC	
100	–	O	NC	

■ PD5771B (DISPLAY ASSY: IC3000)

• Display Microcomputer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	KEY5	I	KEY AD input	41	STANDBY	O	Standby LED
2	MR SW	O	Multi room input Pioneer/others L: Pioneer	42	MCACC	O	MCACC LED
3	KEY1	I	KEY AD input	43	1394	O	1394 LED
4	KEY2			44	NC	O	Non connection
5	KEY3			45	NC		
6	KEY4			46	NC		
7	1W WUP	O	1W correspondence main wakeup	47	NC		
8	HP	I	Headphone detection (active: H)	48	NC		
9	SR IN	I	Remote control input of main room	49	NC		
10	RESET	–	Reset input from the main microcomputer	50	NC		
11	NC	O	Non connection	51	INPUT_R	I	Input selector RIGHT
12	NC			52	INPUT_L	I	Input selector LEFT
13	Vss	–	Ground	53	NC	O	Non connection
14	XIN	–	Oscillator	54	NC	O	Non connection
15	XOUT	–	Oscillator	55	VOL_–	I	Volume – direction
16	Vcc	–	Power supply 5V	56	VOL_+	I	Volume + direction
17	CHECKER	I	Checker mode detection (10kΩ pulldown)	57	NC	O	Non connection
18	NC	O	Non connection	58	RY-SB	O	Surround back/SP-B relay ON/OFF (active: H)
19	NC			59	RY-C/S	O	C/S relay ON/OFF (active: H)
20	NC			60	NC	O	Non connection
21	MIC SW	I	MIC detection	61	RY-HP	O	Headphone relay ON/OFF (active: H)
22	232C DET	I	232C signal input detection	62	RY-A	O	Speaker A relay ON/OFF (active: H)
23	MR IN	I	Remote control input of sub room (active: H)	63	NC	O	Non connection
24	NC	O	Non connection	64	NECK	O	6/8Ω switch L: 6Ω, H: 8Ω, Initial: 8Ω
25	NC	O	Non connection	65	RDY	O	Communication ready with main UCOM
26	NC			66	CLK	O	Communication clock with main UCOM
27	NC			67	DO	O	Communication data out with main UCOM
28	VEE	–	Ground	68	DI	I	Communication data in with main UCOM
29	NC	O	Non connection	69	FL_LAT	O	FL DRV LAT
30	NC			70	FL_CLK	O	FL DRV CLK
31	NC			71	FL_DO	O	FL DRV DATA
32	NC			72	FL_BK	O	FL DRV BK
33	NC			73	AVSS	–	Ground
34	NC			74	VREF	–	5V reference voltage
35	NC			75	NC	O	Non connection
36	NC			76	CS	I	Communication CS with main UCOM
37	NC			77	NC	O	Non connection
38	NC			78	NC		
39	NC			79	NC		
40	NC			80	NC		

■ BU4094BCF (MAIN CONTROL ASSY: IC502)

• Expansion IC

● Pin Function

No.	Pin Name	Pin Function	Active
1	DEM_STP	Demodulator oscillation OFF/ON	H
2	DEM_RST	Demodulator reset L: RESET	L
3	NJM2279_SW1	NJM2279 video control of sub room system	
4	NJM2279_SW2		H
5	NJM2596_SW2	NJM2596 video control of main system	H
6	NJM2596_SW3		H
7	NJM2596_SW4		H
8	NJM2596_SW5		

■ BU4094BCF (MAIN CONTROL ASSY: IC503)

• Expansion IC

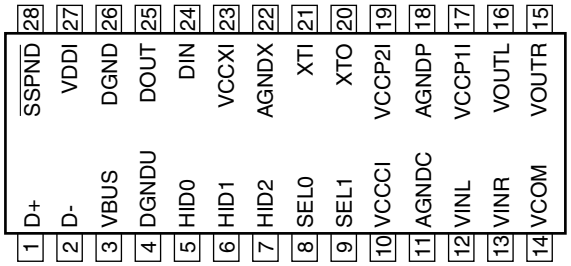
● Pin Function

No.	Pin Name	Pin Function	Active
1	OSD ON	ON at OSD on	H
2	TC9215_C34	Switch the DSP/DIRECT/MULTI CH IN of surround signal H: Multi ch input path	
3	PHONO GAIN	"H" at PHONO equalizer ON	H
4	DSDM	DSD DIRECT control (VSX-55TXi only)	
5	TC74HC4053_INH	Select the Component/D4 input (2 inputs → 1 output)	
6	TC74HC4053_A		
7	FAN DRIVE	ON when rotates the FAN	H
8	LOFAN	Not used "H" fixed	

■ PCM2902EG (COAXIAL IN ASSY: IC1681)

• USB Codec IC

● Pin Assignment (Top view)

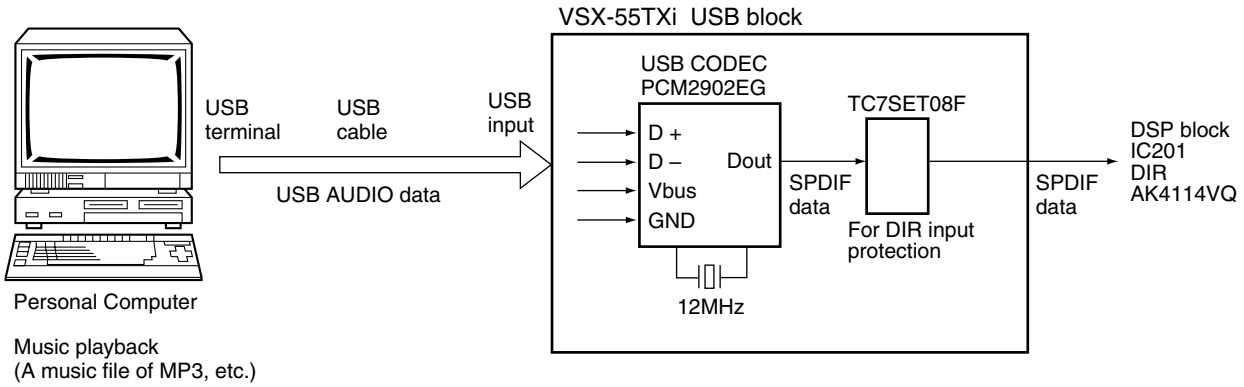


● Pin Function

No.	Pin Name	I/O	Pin Function
1	D+	I/O	USB differential input/output plus(1)
2	D–	I/O	USB differential input/output minus(1)
3	VBUS	I	Connect to USB power (VBUS)
4	DGNDU	–	Digital ground for USB transceiver
5	HID0	I	HID key state input (mute), active high(3)
6	HID1	I	HID key state input (volume up), active high(3)
7	HID2	I	HID key state input (volume down), active high(3)
8	SEL0	I	Must be set to high(6)
9	SEL1	I	Must be set to high(6)
10	VCCCI	–	Internal analog power supply for codec(4)
11	AGNDC	–	Analog ground for codec
12	VINL	I	ADC analog input for L-channel
13	VINR	I	ADC analog input for R-channel
14	VCOM	–	Common for ADC/DAC (VCCCI/2) (4)
15	VOUTR	O	DAC Analog output for R-channel
16	VOUTL	O	DAC analog output for L-channel
17	VCCP1I	–	Internal analog power supply for PLL(4)
18	AGNDP	–	Analog ground for PLL
19	VCCP2I	–	Internal analog power supply for PLL(4)
20	XTO	O	Crystal oscillator output
21	XTI	I	Crystal oscillator input(2)
22	AGNDX	–	Analog ground for oscillator
23	VCCXI	–	Internal analog power supply for oscillator(4)
24	DIN	I	S/PDIF input(5)
25	DOUT	O	S/PDIF output
26	DGND	–	Digital ground
27	VDDI	–	Internal digital power supply(4)
28	$\overline{\text{SSPND}}$	O	Suspend flag, active low (Low: suspend, High: operational)

(1) LV-TTL level
(2) 3.3-V CMOS level input
(3) 3.3-V CMOS level input with internal pulldown. This pin informs the PC of serviceable control signals such as mute, volume up, or volume down, which has no connection with the internal DAC or ADC directly. See the volume control and mute control section.
(4) Connect a decouple capacitor to GND
(5) 3.3-V CMOS level input with internal pulldown, 5 V tolerant
(6) TTL Schmitt trigger, 5 V tolerant

● Flow of USB Input Data



About PCM2902EG

- With codec of USB BUS POWERED, power is supplied from Vbus of USB, and work. (work with a power supply of VSX-55TXi irrelatively.)
- Be USB codec, but analog I/O and digital (SPDIF) input are not using in VSX-55TXi.
- When only connects to PC and receiver (VSX-55TXi) is turned on, the output of TC7SET08F outputs.

● Help of Non-failure Decision

Symptom when a sound is not output (Symptom is different by each OS)

- Confirm a driver whether PC is recognizing it. (With a device manager).
- Is a switch of sound sourse performed properly? (Control Panel, Sound or Multimedia)
- Is volume control of PC adjusted?
- How is other PC?
- In the state that does not change PC setting, is sound output in other VSX-55TXi?
- When uses CD-ROM and playback a music CD, and a sound is not output, is digital playback of CD-ROM checked?

When contain noise

- There is a bug in early USB AUDIO driver of WINDOWS XP, and contain noise once for several minutes. (Correspond with WINDOWS UPDATE.)
- An affinity problem with chip set
- Adaptation problem with chip set (refer to next item)
- Performance issue of PC. (Release resident software as measures.)
- Noise when using the other software during music playback. (Do not guarantee or do not use the other software)
- Do contain the same noise even if changes the PC?

Reference

Confirmation item of the USB part with Function checker.
Supply a power supply (+5V: pin 3, GND: pin 4) of IC1681 (PCM2902EG), and connect D+ (pin1) to GND.
Confirm that X1681 (ASS7047) starts oscillating.

Support OS	
Windows	98 / 98SE / ME
Windows	2000 Professional
Windows	XP Home / Professional

● Adaptation Problem with Chip Set

PCM2902EG caution of operation

Operating environment and findings of PCM2902EG

Evaluation PC: Libretto PAL2060 TNML made by Toshiba

(1) CPU: Crusoe 600MHz made by Transmeta
Use chip set: Transmeta N/B (North Bridge)
M1533 (South Bridge) made by ALi
OS: Windows ME

(2) CPU: Cerelon 566MHz made by Intel
Use chip set: Aladdin Pro 5 (North Bridge) and M1533 (South Bridge) made by ALi
OS: Windows ME

(3) CPU: K6-2 400MHz made by AMD
Use chip set: Aladdin 5 (North Bridge) and M1543 (South Bridge) made by ALi
OS: Windows ME

When contain noise by a problem of the chip set side, there is a problem in the PC side because even other USB audio equipment contains noise.

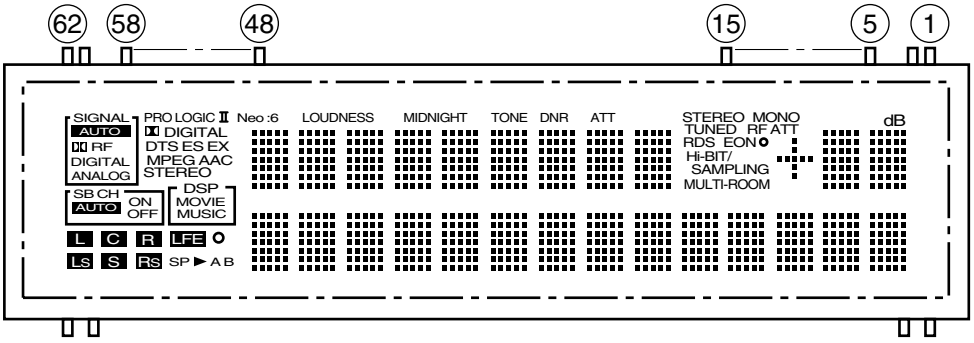
Therefore, do not recommend use in the condition and environment as mentioned above.

7.2.2 DISPLAY

■ AAV7087 (DISPLAY ASSY : V3000)

• FL DISPLAY

• Pin Assignment

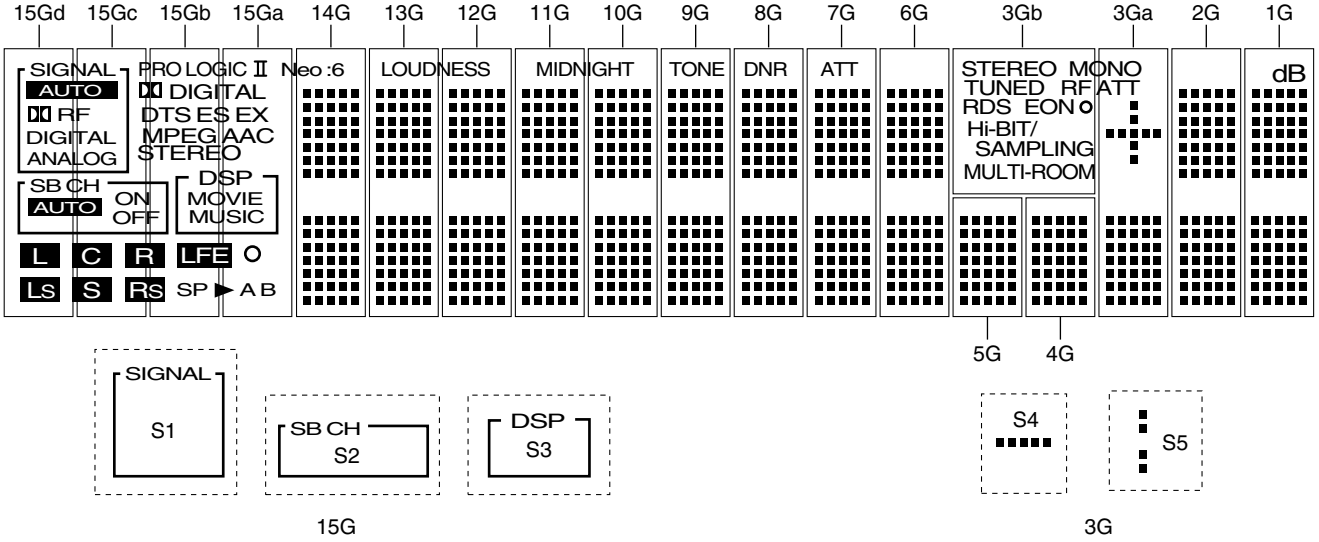


• Pin Connection

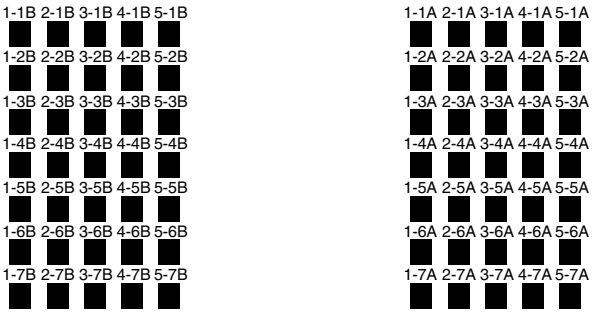
Pin No.	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47-3	2	1
Connection	F2	F2	NP	NP	GND	GND	NC	VH	NC	VDD	BK	LAT	CLK	SI	SO	NP	F1	F1

NOTE
1) F1, F2..... Filament
2) NP..... No pin (5-15 cut it by 2mm)
3) DL..... Datum Line
4) GND..... GND pin
5) VH..... High Voltage Supply pin
6) VDD..... Logic Voltage Supply pin
7) NC..... No connection
(NC pin should be electrically open on the PC board)
8) BK..... Driver Output Blanking
9) LAT..... Latch Control Input
10) CLK..... Shift Register Clock
11) SI..... Serial Data Input
12) SO..... Serial Data Output
(to be open, if don't use)
13) Field of vision is a minimum of 21°
from the lower side.

• Grid Assignment



• Segment Designation



(Lower stage)
(14G to 1G)

(Upper stage)
(14G to 6G, 2G, 1G)

• Anode Connection

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
P1	Neo:6		LOUDNESS		MIDNIGHT		TONE	DNR	ATT	–	–	–	STEREO	–	dB
P2	PROLOGIC	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	–	–	MONO	1-1A	1-1A
P3	Ⅱ	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	–	–	TUNED	2-1A	2-1A
P4	S1	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	–	–	RF ATT	3-1A	3-1A
P5	AUTO	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	–	–	RDS	4-1A	4-1A
P6	RF	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	–	–	EON	5-1A	5-1A
P7	DIGITAL	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	–	–	○	1-2A	1-2A
P8	ANALOG	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	–	–	HI-BIT/ SAMPLING	2-2A	2-2A
P9	DIGITAL	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	–	–	S4	3-2A	3-2A
P10	DTS	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	–	–	S5	4-2A	4-2A
P11	ES	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	–	–	–	5-2A	5-2A
P12	EX	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	–	–	–	1-3A	1-3A
P13	MPEG	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	–	–	–	2-3A	2-3A
P14	AAC	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	–	–	–	3-3A	3-3A
P15	STEREO	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	–	–	–	4-3A	4-3A
P16	S2	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	–	–	–	5-3A	5-3A
P17	AUTO	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	–	–	–	1-4A	1-4A
P18	ON	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	–	–	–	2-4A	2-4A
P19	OFF	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	–	–	–	3-4A	3-4A
P20	S3	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	–	–	–	4-4A	4-4A
P21	MOVIE	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	–	–	–	5-4A	5-4A
P22	MUSIC	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	–	–	–	1-5A	1-5A
P23	L	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	–	–	–	2-5A	2-5A
P24	C	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	–	–	–	3-5A	3-5A
P25	R	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	–	–	–	4-5A	4-5A
P26	LS	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	–	–	–	5-5A	5-5A
P27	S	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	–	–	–	1-6A	1-6A
P28	RS	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	–	–	–	2-6A	2-6A
P29	LFE	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	–	–	–	3-6A	3-6A
P30	○	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	–	–	–	4-6A	4-6A
P31	SP ▶	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	–	–	–	5-6A	5-6A
P32	A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	–	–	–	1-7A	1-7A
P33	B	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	–	–	–	2-7A	2-7A
P34	–	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	–	–	–	3-7A	3-7A
P35	–	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	–	–	–	4-7A	4-7A
P36	–	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	–	–	–	5-7A	5-7A
P37	–	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B
P38	–	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B
P39	–	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B
P40	–	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B
P41	–	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B
P42	–	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B
P43	–	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B
P44	–	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B
P45	–	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B
P46	–	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B
P47	–	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B
P48	–	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B
P49	–	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B
P50	–	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B
P51	–	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B
P52	–	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B
P53	–	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B
P54	–	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B
P55	–	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B
P56	–	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B
P57	–	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B
P58	–	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B
P59	–	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B
P60	–	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B
P61	–	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B
P62	–	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B
P63	–	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B
P64	–	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B
P65	–	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B
P66	–	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B
P67	–	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B
P68	–	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B
P69	–	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B
P70	–	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B
P71	–	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B

• Anode Timing Chart

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
P1	T18		T17		T16		T9	T8	T7	–	–	–	T3	–	T1
P2	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	T3	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P11	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	T3	T2	T1
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
P33	–	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1
|	|	|	|	|	|	|	|	|	|	|	|	|	|	|
P71	–	T14	T13	T12	T11	T10	T9	T8	T7	T6	–	–	–	T2	T1

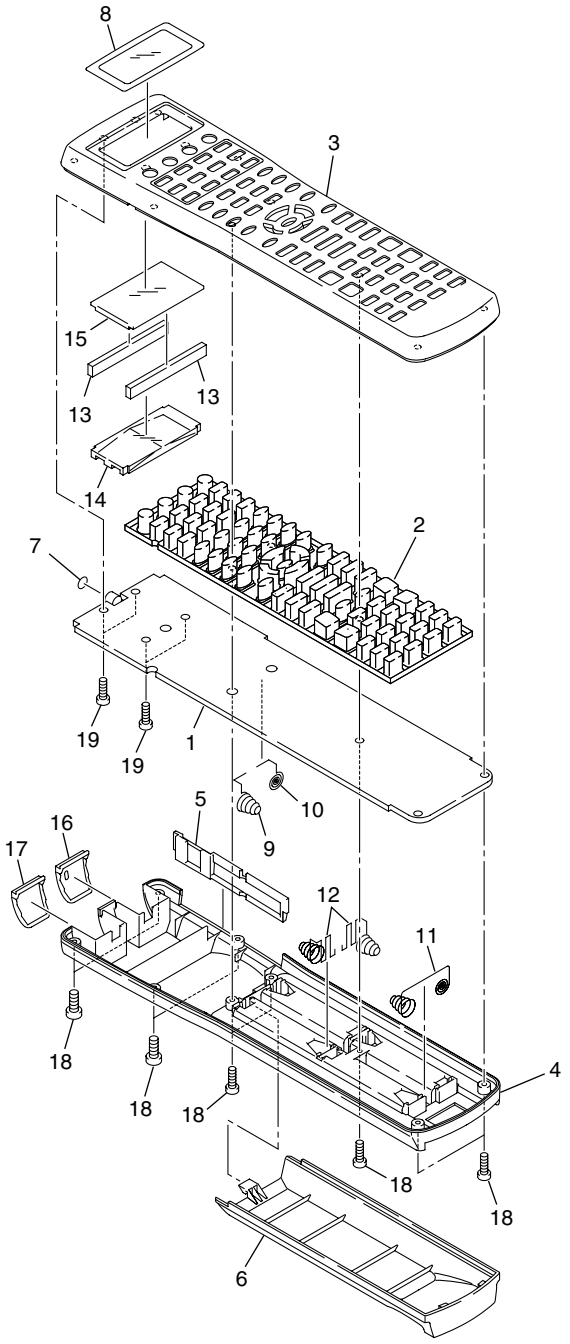
7.3 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

7.4 REMOTE CONTROL UNIT

7.4.1 EXPLODED VIEWS AND PARTS LIST (VSX-55TXi : AXD7325)

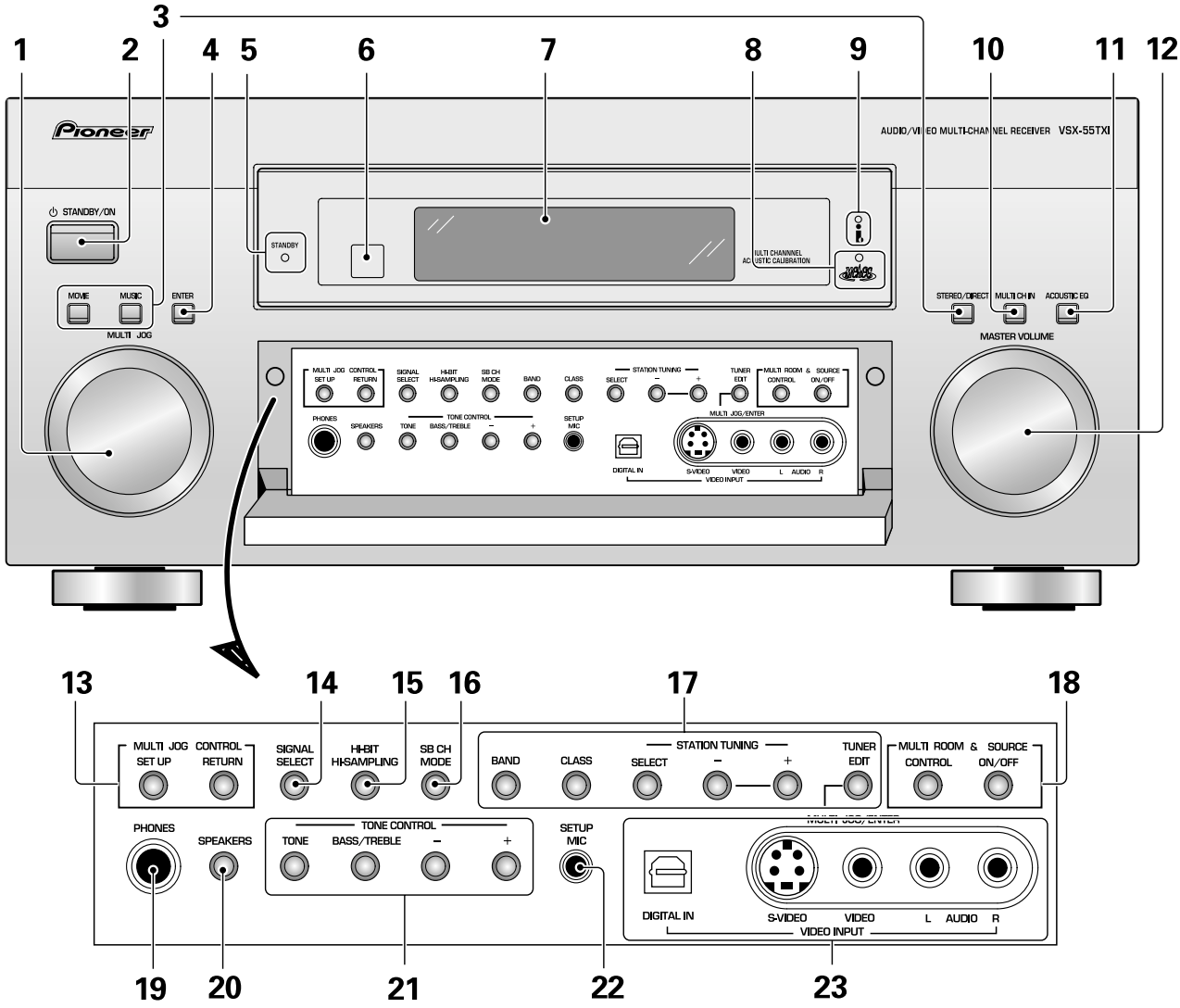


Mark	No.	Description	Part No.
	1	PCB Assy	AZC7301
	2	Rubber Key	AZA7425
	3	Case A	AZN7905
	4	Case B	AZN7892
	5	Frame	AZN7908
	6	Battery Cover	AZN7896
	7	MIC Cap	AZN7909
	8	Name Plate	201RRC-314-01L
	9	Terminal A	411RRC-212-01G
	10	Terminal B	411RRC-213-01G
	11	Battery Terminal	413RRC-143-01R
	12	Spring	413RRC-171-01G
	13	Connector	423RRC-046-01G
	14	Plate	481RRC-018-01G
	15	Shield Plate	801RRC-020-01L
	16	Filter A	811RRC-109-01G
	17	Filter B	811RRC-110-01G
	18	Screw	A-BA2008-225002
	19	Screw	A-BJ2006

8. PANEL FACILITIES

8.1 FRONT PANEL

All the controls on the front panel are explained and/or referenced here. To open the front panel push gently on the lower third of the panel.



1 MULTI JOG dial
You can use this dial for many purposes. When you press the SET UP button (13), you can use it to perform SYSTEM SETUP operations; select a function or a listening mode or do TUNER EDIT functions (in TUNER mode).

2 ⏻ STANDBY/ON button
Press to switch the receiver ON or into STANDBY mode.

3 Listening mode buttons
There are two types of SURROUND modes:
MOVIE: Press to put the receiver into MOVIE mode.
MUSIC: Press to put the receiver into MUSIC mode.
STEREO/DIRECT : Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.

4 ENTER button
Use this button to enter information concerning the SYSTEM SETUP, listening mode or the tuner.

5 STANDBY indicator
Lights when the receiver is in STANDBY mode. (Please note that this receiver consumes a small amount of power [0.8 W] in the standby mode.)

6 Remote sensor
Receives the signals from the remote control.

7 Display

8 MCACC indicator
Lights when the ACOUSTIC CAL EQ is on. (After the Auto Surround Sound Setup has been completed the ACOUSTIC CAL EQ is set on and this display will light.)

9 i.LINK indicator
Lights when an i.LINK -Audio-equipped component is selected.

10 MULTI CH IN button

Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

11 ACOUSTIC EQ button

Press to switch on/off and select the type of acoustic calibration EQ.

12 MASTER VOLUME dial

Use to raise or lower the volume of the receiver.

13 MULTI JOG CONTROL buttons

SET UP

Press to switch the SYSTEM SETUP mode.

RETURN

Press to move back one step in the SYSTEM SETUP process.

14 SIGNAL SELECT button

Press SIGNAL SELECT repeatedly to select one of the following:

AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.

DIGITAL – To select an optical or coaxial digital signal.

ANALOG – To select an analog signal.

15 HI-BIT HI-SAMPLING button

Use this button to switch the AUDIO SCALER mode on or off.

16 SB CH MODE button

Use this button to turn the surround back channels ON/OFF/AUTO or switch the virtual surround back mode between ON/OFF/AUTO.

17 Tuner control buttons

BAND

Press to select the AM or FM band.

CLASS

Press repeatedly to switch the preset station classes.

SELECT

Switches the –/+ buttons between station memory and frequency select modes.

–/+

Selects station memories or frequencies when using the tuner.

TUNER EDIT

Press to memorize and name a station for recall using the MULTI JOG and ENTER buttons.

18 MULTI ROOM & SOURCE buttons

Press to use the multi room feature (requires an optional IR receiver).

CONTROL button

Used together with the MULTI JOG to select the function or use with the MASTER VOLUME to select the volume of the MULTI ROOM system.

ON/OFF buttons

Use to switch MULTI ROOM function on or off.

19 PHONES jack

Connect headphones for private listening (no sound will be heard through the speakers).

20 SPEAKERS (A/B) button

The use of this button depends on how the SURRBACK SYSTEM is set. If NORMAL SYSTEM or MR&S is chosen this button toggles between A and OFF. If SECOND ZONE is chosen this button toggles between A, B, A+B and OFF.

21 TONE CONTROL buttons

TONE button

This button switches between TONE on and off, which bypasses the tone circuitry.

BASS/TREBLE button

Use to select whether the bass or treble will be adjusted.

–/+ buttons

Use to adjust the frequency levels.

22 SETUP MIC jack

Plug in the setup mic here. This is very important in order to set up your system and get proper surround sound.

23 VIDEO INPUT jacks

DIGITAL IN

Digital input for connecting a game console, DVD player or video camera (etc.), that has an optical digital connection.

S-VIDEO

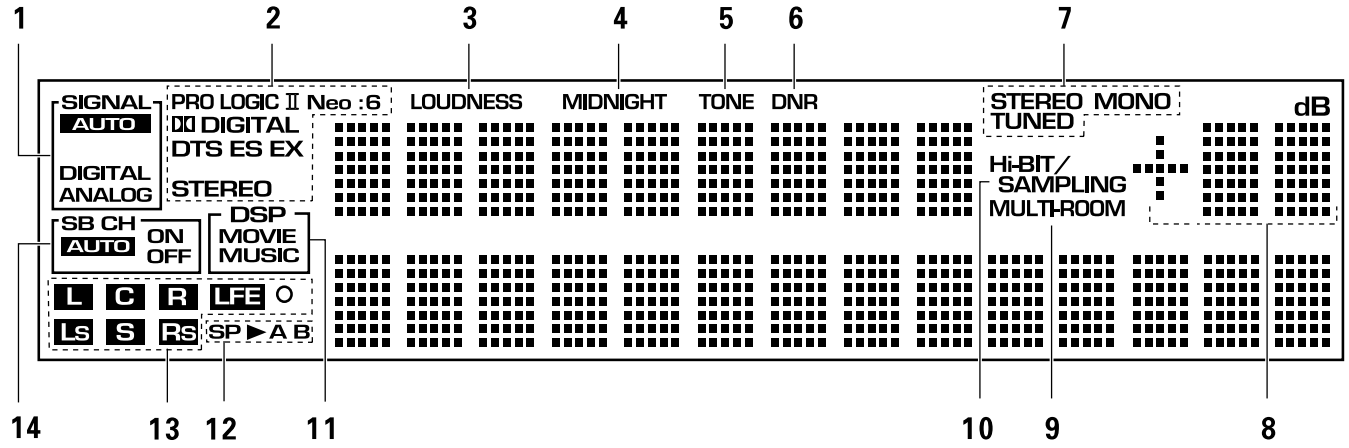
Video input for connecting a portable DVD player or video camera (etc.), that has an S video out.

RCA VIDEO / AUDIO (L/R)

Video input for connecting a portable DVD player or video camera (etc.), that has standard RCA video/audio outputs.

8.2 DISPLAY

All the display information is explained and/or referenced here.



1 SIGNAL indicators
Light to indicate the input signal you selected.

AUTO: Lights when the receiver is set to select the input signal automatically.

DIGITAL: Lights when digital audio signals are selected.

ANALOG: Lights when analog signals are selected.

2 Digital format indicators
PRO LOGIC II: Lights during Dolby Pro Logic II processing.

NEO:6: Lights during NEO:6 processing.

DIGITAL: Lights when a Dolby Digital signal is detected.

DTS: Lights when a DTS signal is detected.

ES: Lights when playing back a DTS ES signal.

EX: Lights when playing back a Dolby Digital EX signal.

STEREO: Lights during two-channel playback.

3 LOUDNESS indicator
Lights when LOUDNESS is on.

4 MIDNIGHT indicator
Lights when MIDNIGHT is on.

5 TONE indicator
Lights when the TONE control is on.

6 DNR indicator
Lights when DIGITAL NR is on.

7 TUNER indicators
STEREO: Lights when an FM stereo broadcast is received in the auto stereo mode.

MONO: Lights when the tuner is set to receive FM broadcasts and when MPX mode is selected.

TUNED: Lights when a broadcast is received.

8 Volume level indicator

9 MULTI-ROOM indicator
Lights when the MULTI ROOM system is on.

10 Hi-BIT/SAMPLING indicator
Lights when the AUDIO SCALER mode is on.

11 DSP indicators
MOVIE: Lights when a MOVIE mode is selected. When a DSP MOVIE mode is selected DSP will light with a box around it.

MUSIC: Lights when a MUSIC mode is selected. When a DSP MUSIC mode is selected DSP will light with a box around it.

12 Speaker indicators
Lights to indicate the current speaker system, A and/or B.

13 Program Format indicators
For Dolby Digital or DTS sources: These indicators change according to which channels are active in the source. When all three **LS** (left surround), **S** (surround) and **RS** (right surround) light at the same time it means a source with a 6.1 channel playback flag is being used.

L – Left front channel.

C – Center channel.

R – Right front channel.

LS – Left surround channel.

S – Surround channel or Surround back channel.

RS – Right surround channel.

LFE – Low Frequency Effects channel.

O – Lights when LFE signal is input.

14 SB CH indicators
Light to indicate the status of the surround back channels.

AUTO – Lights when the SB CH MODE or virtual surround back mode is set to AUTO.

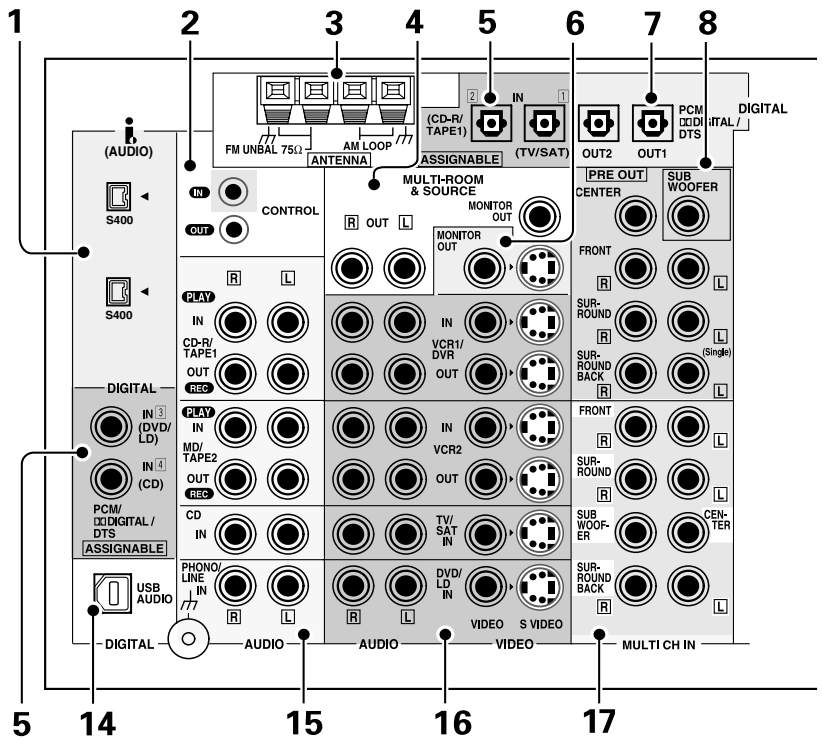
ON – Lights when the SB CH MODE or virtual surround back mode is set to ON.

OFF – Lights when the SB CH MODE or virtual surround back mode is set to OFF.

8.3 REAR PANEL

All the terminals on the back panel are explained and/or referenced here.

VSX-55TXi



1 (AUDIO) - i.LINK connectors

4-pin, S400 i.LINK connectors for connection to i.LINK-equipped players and other components. Each i.LINK connector acts simultaneously as both input and output.

2 CONTROL IN/OUT terminals

You can use these jacks to hook up other PIONEER equipment, that has a CONTROL terminal, so that you can control them all by pointing the remote control(s) at one remote sensor.

3 Radio antenna terminals

Hook up antennas for the radio tuner built into the receiver here.

4 MULTI-ROOM & SOURCE OUT terminals

These terminals output the audio and video signal to a sub-system in a secondary room. Note that the MONITOR OUT here is different than the MONITOR OUT for the main system. These are analog jacks.

5 DIGITAL IN terminals

Use these terminals to input the signal from a DVD, CD player or any other kind of digital player. To be able to play Dolby Digital and other surround soundtracks you need to make digital connections. To do this use the digital terminals here. If you don't connect as per the default settings you need to complete "Assigning the Digital Inputs".

6 MONITOR OUT terminals (connect a TV or monitor here)

Use these terminals to output the video signal to your TV, video projector or monitor in your main room. Be careful not to confuse these jacks with the MULTI ROOM & SOURCE MONITOR OUT.

7 DIGITAL OUT terminals

Use these terminals to output a digital signal to a DVD-R, CD-R, MD recorder or any other kind of digital recorder.

8 PRE OUT analog terminals (connect an amplifier here)

Use these terminals to output the audio signal from this amplifier to a different amplifier if that's how you choose to set up your system.

9 COMPONENT VIDEO MONITOR OUT terminals

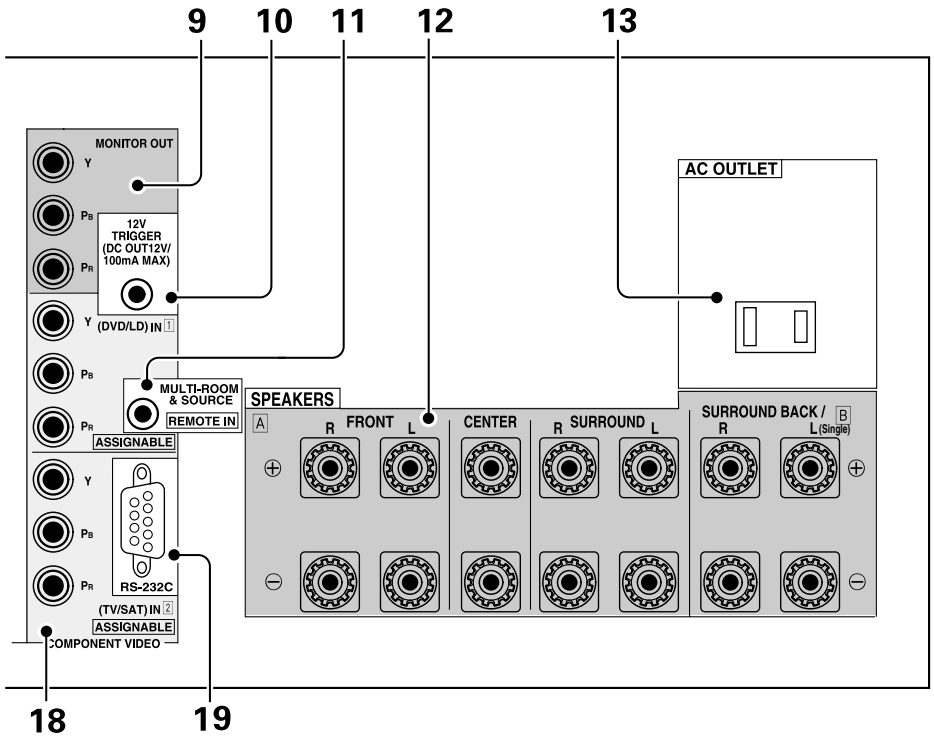
Use these terminals to output the video signal from the COMPONENT VIDEO IN terminals to your TV. See page16 for more information.

10 12V TRIGGER terminal

Use this terminal to output a signal that can automatically turn on another component.

DC OUT12V/100mA is the maximum power.

VSX-55TXi



11 MULTI-ROOM & SOURCE REMOTE IN terminal

Use this terminal to hook up a sub-system in a secondary room. This hook up requires a separately sold IR receiver and allows you to use the receiver to hear different audio sources in different rooms.

12 SPEAKERS terminals

Use these terminals to connect speakers to the receiver. The FRONT, CENTER and SURROUND terminals are for the main speaker system and the SURROUND BACK speakers can be set to either the main system, the SECOND ZONE, or the MULTI ROOM. See "set the SURROUND BACK speakers".

13 AC OUTLET (switched, 100 W max)

Hook up an external component to the power supply of this receiver. Only do this with audio or video components being used in this system and never hook up heavy equipment (like TVs, heaters, air conditioners, refrigerators, etc.) to this receiver.

14 USB AUDIO terminal

Use this terminal to connect a PC to this receiver.

15 Audio input/output terminals (connect analog components here)

Use these terminals to input/output the audio signal from analog components (like a cassette deck or turntable). These are analog jacks.

16 Video components input/output terminals

Input/output signals from your video components (DVD, VCR, TV tuners, SAT tuners, etc.) here.

17 MULTI CH IN terminals

Use these terminals to input a multichannel surround signal (for example, a DVD-Audio signal) in an analog fashion. These are analog jacks.

18 COMPONENT VIDEO IN terminals

Use these terminals to hook up the video connections of your video components with this high quality method. Your components will have to have the terminals as well to take advantage of this kind of connection. If you don't connect as per the default settings you need to complete "Assigning the Component Video Inputs".

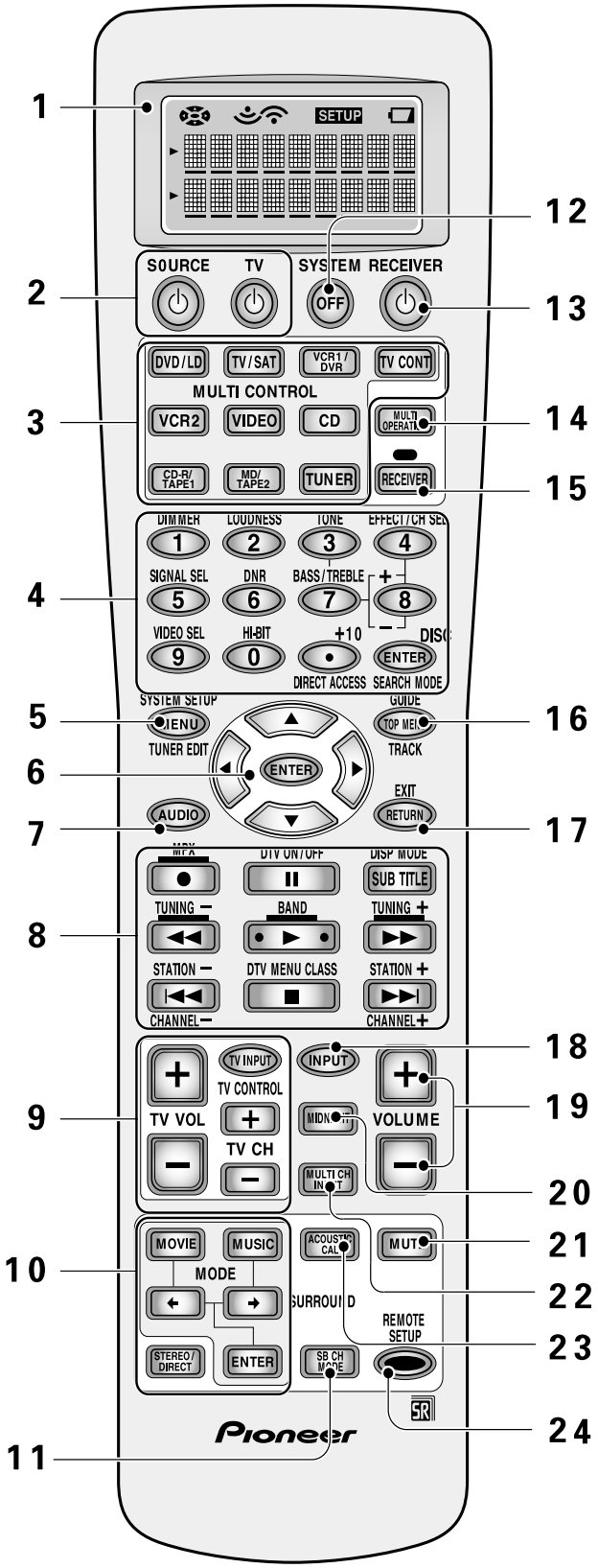
19 RS-232C Connection

This is a future-oriented port that has the possibility on inputting and/or outputting information to/ from the receiver.

8.4 REMOTE CONTROL UNIT

This page describes the buttons on the remote control used to operate the receiver.

VSX-55TXi : AXD7325



1 Remote Control Display Screen

2 SOURCE ⏻ button

Use this button to turn on/off other components. You must input the preset code in order to use this function.

TV ⏻ button

This is a dedicated TV button. Use it to turn on/off your TV.

3 MULTI CONTROL buttons

These buttons are the basic controls that switch the mode of the receiver and the remote control, which allows you to control your other components.

TV CONT: Press so that the remote control can operate the TV control commands.

4 Number buttons

These can be used for many purposes depending on the mode of the remote control.

When in receiver mode the buttons operate as below:

DIMMER button

Use to adjust the brightness of the receiver's display.

LOUDNESS button

Switches the LOUDNESS mode on or off.

TONE button

This button switches between TONE on and off, which bypasses the tone circuitry.

BASS/TREBLE buttons

Use to select whether the bass or treble will be adjusted.

(+/–) buttons

Use to adjust the TONE level, effect level, channel level and sound delay as well as make Dolby Pro Logic II MUSIC parameter settings.

EFFECT/CH SEL button

Switches between the different channels so you can add volume individually to each channel with the + and – buttons. Also selects EFFECT mode, Dolby Pro Logic II MUSIC parameters and sound delay settings.
You can then use the + and ñ buttons to make these adjustments.

SIGNAL SEL button

Press repeatedly to select one of the following:

AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.

DIGITAL – To select an optical or coaxial digital signal.

ANALOG – To select an analog signal.

DNR (DIGITAL NR) button
Switches the DIGITAL NR on or off.

VIDEO SEL button
Use to toggle between the different video input possibilities.

HI-BIT button
Use this button to switch the AUDIO SCALER on or off.

5 SYSTEM SETUP button
Use for all system setups, including the speaker and sound systems. For more information see "Setting Up for Surround Sound".
For a DVD player use this button to bring up the DVD menu and for a tuner use this button in the same way as the TUNER EDIT button.

6 ▲/▼/◄/►/ENTER buttons
These buttons can be used for a variety of operations in the SYSTEM SETUP menu.
These buttons are used to control the menus for other components when in those modes (DVD, digital TV tuner, satellite tuner, cable tuner, etc.). In TUNER mode, they can select a station and/or a frequency.

7 AUDIO button
Use to switch the audio tracks of a DVD when in DVD mode.

8 Command button for other components
Use these buttons to control other components you selected with the MULTI CONTROL buttons. You must input the preset code in order use this function.

9 TV CONTROL buttons
The following buttons are used to control the TV only and can be used once they are preset to control your TV.
TV INPUT: Press to select the input source for the TV.
TV CH +/– : Use these buttons to change the channel of the TV.
TV VOL +/– : Press to control the volume of the TV.

10 Listening mode buttons
SURROUND buttons (MOVIE, MUSIC, ⬅➡ & ENTER):
MOVIE: Press to put the receiver into MOVIE listening mode.
MUSIC: Press to put the receiver into MUSIC listening mode.
⬅➡: Use to select the MOVIE or MUSIC listening mode.
ENTER: Use this button to enter information concerning the listening modes.
STEREO/DIRECT: Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.

11 SB CH MODE button
Use this button to turn the surround back channels ON/OFF/AUTO or switch the virtual surround back mode between ON/OFF/AUTO.

12 SYSTEM OFF button
This button turns off components in two ways. First, when pressed it will turn off all PIONEER components. Secondly, any component that has programmed into the SYSTEM OFF settings will be turned off.

13 ⏻ RECEIVER (STANDBY/ON) button
Press to turn power of the receiver on or to standby (off).

14 MULTI OPERATION button
Use this button to start the multi operation mode.

15 RECEIVER button
Use this button to switch the remote control into receiver mode in order to get certain receiver functions or do receiver setups.

16 TOP MENU/GUIDE button
Use to find stations or menus on a digital TV tuner. For a DVD player use this button to bring up the DVD menu.

17 RETURN button
When you are in a receiver setup operation this button will go back one step in the SYSTEM SETUP procedure. When you are using your DVD menu screen this button acts the same as the DVD player's "Return" button. When you are using cable tuners, satellite tuners or digital TV tuners this button will either exit you from the menu screen or act like a "Return" button above, depending on the maker of the unit.

18 INPUT button
Press to select an input source. The button will cycle through all the possible sources including USB, PHONO and i.LINK components.

19 VOLUME (+/–) buttons
Use to raise or lower the volume of the receiver.

20 MIDNIGHT button
Switches the MIDNIGHT listening mode on or off.

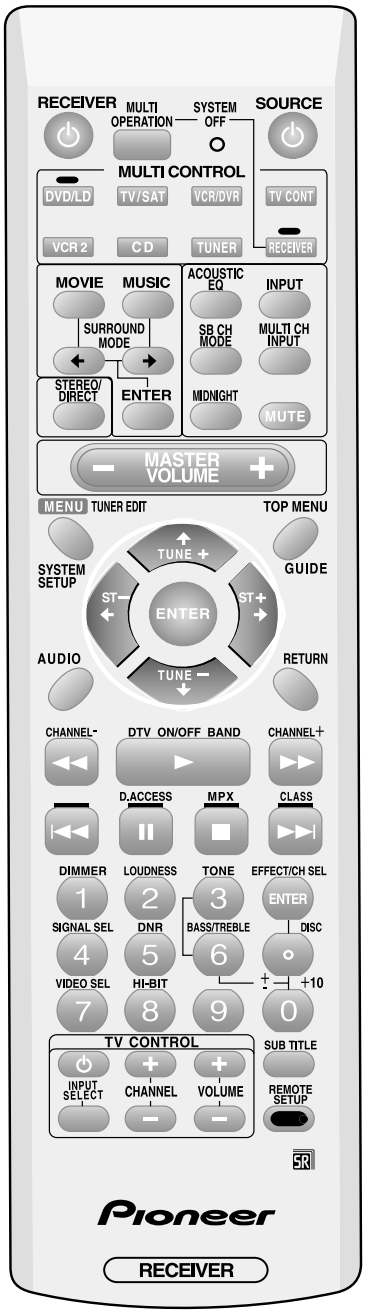
21 MUTE button
Press to mute or restore the volume.

22 MULTI CH INPUT button
Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

23 ACOUSTIC CAL button
Press to switch on/off and select the type of acoustic calibration EQ.

24 REMOTE SETUP button
Use to customize the remote control functions and the remote control itself. (See "Setting Up the Remote Control to Control Other Components").

VSX-53TX : AXD7365



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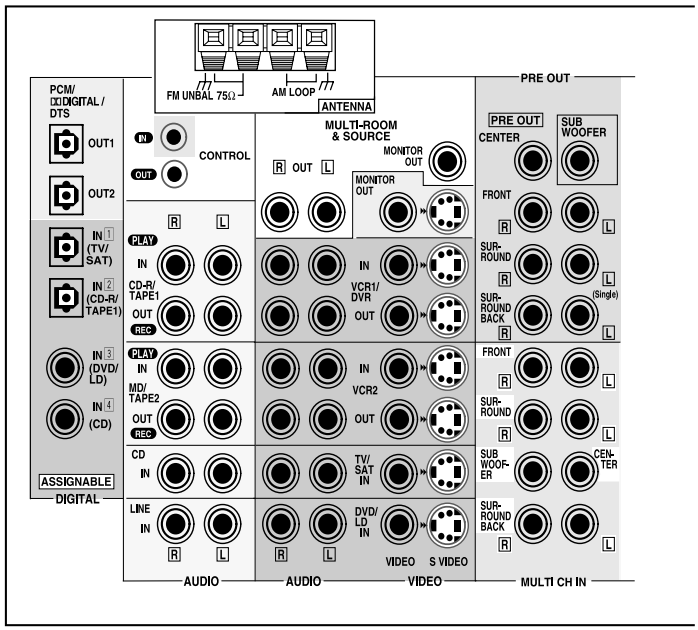

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